Infrastructure Investment Roundtable

BACKGROUND MATERIALS

Wharton
University of Pennsylvania

ALTERNATIVE INVESTMENTS
Initiative

SESSION 3:
PUBLIC POLICY, REGULATION AND THE TAX CUTS AND JOBS ACT

Wharton
UNIVERSITY of PENNSYLVANIA

ALTERNATIVE INVESTMENTS
Initiative

Legislative Outline for Rebuilding Infrastructure in America

THE WHITE HOUSE

TO THE CONGRESS OF THE UNITED STATES:

I have enclosed with this message my Administration's framework for rebuilding infrastructure in America. Our Nation's infrastructure is in an unacceptable state of disrepair, which damages our country's competitiveness and our citizens' quality of life. For too long, lawmakers have invested in infrastructure inefficiently, ignored critical needs, and allowed it to deteriorate. As a result, the United States has fallen further and further behind other countries. It is time to give Americans the working, modern infrastructure they deserve.

To help build a better future for all Americans, I ask the Congress to act soon on an infrastructure bill that will: stimulate at least $1.5 trillion in new investment over the next 10 years, shorten the process for approving projects to 2 years or less, address unmet rural infrastructure needs, empower State and local authorities, and train the American workforce of the future.

To develop the infrastructure framework I am transmitting today, my Administration engaged with Governors, mayors, Federal agencies, State and local agencies, Members of Congress, industry, and most importantly, the American people who depend on upgraded infrastructure. The product of these efforts is a roadmap for the Congress to draft and pass the most comprehensive infrastructure bill in our Nation's history. My Administration's plan addresses more than traditional infrastructure -- like roads, bridges, and airports -- but addresses other needs like drinking and wastewater systems, waterways, water resources, energy, rural infrastructure, public lands, veterans' hospitals, and Brownfield and Superfund sites. The reforms set forth in my plan will strengthen the economy, make our country more competitive, reduce the costs of goods and services for American families, and enable Americans to build their lives on top of the best infrastructure in the world.

My Administration is committed to working with the Congress to enact a law that will enable America's builders to construct new, modern, and efficient infrastructure throughout our beautiful land.

THE WHITE HOUSE,

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PART 1—FUNDING AND FINANCING INFRASTRUCTURE IMPROVEMENTS

I. INFRASTRUCTURE INCENTIVES PROGRAM

States and localities are best equipped to understand the infrastructure investments needs of their communities. The infrastructure incentives program, described below, would encourage increased State, local, and private investment in infrastructure. This program would provide for targeted Federal investments, encourage innovation, streamline project delivery, and help transform the way infrastructure is designed, built, and maintained.

Under this program, States and localities would receive incentives in the form of grants. Project sponsors selected for award would execute an agreement with express progress milestones. Federal incentive funds would be conditioned upon achieving the milestones within identified time frames.

A. Establishment of the Incentives Program

This provision would establish the Incentives Program to maximize investment in infrastructure. The purposes of this program would include—

- attracting significant new, non-Federal revenue streams dedicated to infrastructure investments;
- creating significant leverage of Federal infrastructure investments;
- assuring long-term performance of capital infrastructure investments;
- modernizing infrastructure project delivery practices;
- increasing economic growth;
- spurring the development and use of new and rapidly evolving infrastructure technology to improve cost and improve performance; and
- ensuring Federal grant recipients are accountable for achieving specific, measurable milestones.

B. Applicability

The Incentives Program would provide support to wide-ranging classes of assets, including the following governmental infrastructure: surface transportation and airports, passenger rail, ports and waterways, flood control, water supply, hydropower, water resources, drinking water facilities, wastewater facilities, stormwater facilities, and Brownfield and Superfund sites.

C. Funding

- $100 billion would be made available for the Incentives Program. The funds would be divided in specific amounts to be administered by the United States Department of Transportation (DOT), United States Army Corps of Engineers (USACE), and Environmental Protection Agency (EPA).

- Other Federal agencies seeking to incentivize eligible projects within their areas of jurisdiction could petition DOT, USACE, or EPA to transfer Incentives Program funds to be used consistent with the requirements under the program.
- A percentage of the Incentives Program funds would be set aside for temporary administrative expenses necessary to administer the program.

D. Applications and Evaluation Criteria

- Each lead Federal agency would solicit applications as soon as practicable after enactment of the Incentives Program and every six months thereafter.
- Each lead Federal agency would determine the content, format, and timing of applications and would make incentive awards. Applications also would include information on each of the evaluation criteria.
- The evaluation criteria would be—
    - the dollar value of the project or program of projects (weighted at 10 percent);
    - evidence supporting how the applicant will secure and commit new, non-Federal revenue to create sustainable, long-term funding for infrastructure investments (weighted at 50 percent);
    - evidence supporting how the applicant will secure and commit new, non-Federal revenue for operations, maintenance and rehabilitation (weighted at 20 percent);
    - updates to procurement policies and project delivery approaches to improve efficiency in project delivery and operations (weighted at 10 percent);
    - plans to incorporate new and evolving technologies (weighted at 5 percent); and
    - evidence supporting how the project will spur economic and social returns on investment (weighted at 5 percent).
- Each lead Federal agency would calculate each application score by multiplying the weighted score from the evaluation criteria by the percentage of non-Federal revenues (out of total revenues) that would be used to fund the project or program of projects.
- To ensure that applicants could receive credit for actions that occurred prior to the enactment of the Incentives Program that align with the desired outcomes of the program, the Incentives Program would include a look-back period. The look-back period would be defined as the time preceding the project sponsor's completed application during which the new revenue generation was implemented. Subsequent applications in later years would add such additional time to the time after enactment of the program. The look-back period would be three years before the date of application to the program, and the determination would be made based on the implementation date (or take effect date) of the new revenue source. In evaluating applications, the project sponsor's new revenue application score would be multiplied by a relevant multiplier to determine scoring as illustrated below:

Years Passed	New Revenue Credit Score Multiplier
>3	X percent
2-3	X percent
1-2	X percent
0-1	X percent
After February 2018	100 percent

- The lead Federal agency would have sole discretion to provide credit for previous revenue generation. The agency could request additional information from a project sponsor to clarify how the revenue source has met expectations and revise forecasts to reflect actual performance. The amount of funds dedicated to the look-back would not exceed 5 percent of the total amount for the Incentives Program.

E. Incentive Grant Awards

- An incentive grant could not exceed 20 percent of new revenue.
- Any individual State could not receive more than 10 percent of the total amount available under the Incentives Program.
- The lead Federal agency and the grant recipient would enter into an infrastructure incentives agreement setting forth progress milestones toward obtaining increased revenue that the recipient would achieve prior to receiving the grant award, which could include advance grant disbursements.
- Any agreement with incomplete milestones after two years would be voided, except upon determination by the lead Federal agency that good cause exists to renew the agreement for an additional period not to exceed one year. Any funds available from a voided agreement could be re-allocated through a new application process.

II. RURAL INFRASTRUCTURE PROGRAM

The Rural Infrastructure Program, described, below would provide for significant investment in rural infrastructure to address long-unmet needs. This investment is needed to spur prosperous rural economies, facilitate freight movement, improve access to reliable and affordable transportation options and enhance health and safety for residents and businesses. Under this program, States would be incentivized to partner with local and private investments for completion and operation of rural infrastructure projects.

A. Establishment of Rural Infrastructure Program

This provision would establish a Rural Infrastructure Program to—

- improve the condition and capability of rural infrastructure through capital improvements and outcomes-driven planning efforts that enhance private

sector productivity, modernize existing infrastructure systems, and prioritize projects essential for efficiency and safety;
- expand access to markets, customers, and employment opportunities with projects that sustain and grow business revenue and personal income for rural Americans;
- enhance regional connectivity through public and private interregional and interstate rural projects and initiatives that reduce costs for sustaining safe, quality rural communities; and
- increase rural economic growth and competitiveness by closing local infrastructure gaps in development-ready areas to attract manufacturing and economic growth to rural America.

B. Applicability

- Eligible asset classes under the Rural Infrastructure Program would include:
  - Transportation: roads, bridges, public transit, rail, airports, and maritime and inland waterway ports.
  - Broadband (and other high-speed data and communication conduits).
  - Water and Waste: drinking water, wastewater, stormwater, land revitalization and Brownfields.
  - Power and Electric: governmental generation, transmission and distribution facilities.
  - Water Resources: flood risk management, water supply, and waterways.
- This program only would apply to the specified asset classes and to other infrastructure assets directly attributable to, and essential to, the operation of those assets.

C. Funding

- $50 billion would be made available to the Rural Infrastructure Program for capital investments in rural infrastructure investments.
- 80 percent of the funds under the Rural Infrastructure Program would be provided to the governor of each State via formula distribution. The governors, in consultation with a designated Federal agency and State directors of rural development, would have discretion to choose individual investments to respond to the unique rural needs of their States.
- 20 percent of the funds under the Rural Infrastructure Program would be reserved for rural performance grants within eligible asset classes and according to specified criteria.
- Funds made available to States under this program would be distributed as block grants to be used for infrastructure projects in rural areas with populations of less than 50,000.
- A portion of the Rural Infrastructure Program funds would be set aside for Tribal infrastructure and territorial infrastructure, with the remainder available for States.

D. Distribution of Rural Infrastructure Program Formula Funds

- The statute would create a "rural formula," calculated based on rural lane miles and rural population adjusted to reflect policy objectives. Each State would receive no less than a specified statutory minimum and no more than a specified statutory maximum of the Rural Infrastructure Program formula funds, automatically.

E. Applications and Evaluation Criteria for Rural Performance Grants

- In addition to receiving formula funds under the Rural Infrastructure Program, States also could apply for rural performance grants and would be encouraged to do so within two years after enactment. Rural performance grants would be available for up to ten years after enactment or until funds were expended. In order to qualify for rural performance grants, a State would be required to:
    - Publish a comprehensive rural infrastructure investment plan (RIIP) within 180 days of receiving rural formula funds. The RIIP would demonstrate how the State's intended rural projects align with the evaluation criteria in the infrastructure incentives program, including State, local and private sector investment in eligible projects.
    - Demonstrate the quality of any investments planned with rural performance funds.
    - Demonstrate performance in leveraging formula distributions with Federal credit programs and rewarding rural interstate projects through the infrastructure incentives program.
    - Demonstrate the State's performance in utilization of Rural Infrastructure Program formula funds, consistent with the RIIP based on stated general criteria.
- For specific sectors, a State also would demonstrate other criteria the administering agency determines appropriate consistent with this program, including increased broadband availability and investment.

F. Tribal Infrastructure

- The Rural Infrastructure Program also would ensure investment in Tribal infrastructure by providing dedicated funding to the Secretary of Transportation for distribution through the Tribal Transportation Program and to the Secretary of Interior for distribution through grants or awards to Tribes determined by a process created in consultation with Tribes.

G. Territorial Infrastructure

- The Rural Infrastructure Program also would provide dedicated funding to address infrastructure needs of U.S. Territories.

III. TRANSFORMATIVE PROJECTS PROGRAM

The Transformative Projects Program, described below, would provide Federal funding and technical assistance for bold, innovative, and transformative infrastructure projects that could dramatically improve infrastructure. Funding under this program would be awarded on a competitive basis to projects that are likely to be commercially viable, but that possess unique technical and risk characteristics that otherwise deter private sector investment. The Transformative Projects Program would support projects that, with Federal support, are capable of generating revenue, would provide net public benefits, and would have a significant positive impact on the Nation, a region, State, or metropolitan area.

A. Establishment of Transformative Projects Program

This provision would establish a program to advance transformative projects. The purposes of the Transformative Projects Program would include—

- significantly improving performance, from the perspective of availability, safety, reliability, frequency, and service speed;
- substantially reducing user costs for services;
- introducing new types of services; and
- improving services based on other related metrics.

B. Applicability

- The Transformative Projects Program would fundamentally transform the way infrastructure is delivered or operated. They would be ambitious, exploratory, and ground-breaking project ideas that have significantly more risk than standard infrastructure projects, but offer a much larger reward profile.
- Infrastructure sectors covered by this program could include, but would not be limited to, the transportation, clean water, drinking water, energy, commercial space, and broadband sectors.

C. Funding

- $20 billion would be made available for the Transformative Projects Program.
- The Department of Commerce (DOC) would serve as the Chair for the purposes of program administration and could request other relevant Federal agency employees to serve on a temporary assignment to assist in the administration of this program.
- A percentage of the Transformative Projects Program funds would be set aside for temporary administrative expenses necessary to administer the program, including technical assistance.

D. Funding Tracks

- Funding under this program would be available under three tracks, each of which would be designed to support a distinct phase of the project life cycle:

demonstration, project planning, and capital construction. Applicants could apply for funding under all three tracks or under individual tracks.

- To optimize the return on taxpayer investment, funding under this program could be used for—
  - up to 30 percent of eligible costs under the demonstration track;
  - up to 50 percent of eligible costs under the project planning track; and
  - up to 80 percent of eligible costs under the capital construction track.

E. Technical Assistance

- An applicant could seek technical assistance from the Federal Government in addition to the funding tracks, or could seek technical assistance alone under the Transformative Projects Program.

F. Applications and Evaluation Criteria

- The DOC would administer the Transformative Projects Program with an interagency selection committee composed of representatives of relevant Federal agencies. The Secretary of Commerce would serve as the chair of the committee. Given the multidisciplinary nature of the Transformative Projects Program, interagency evaluation panels comprised of individuals from the applicable Federal agencies would review and evaluate all applications.

G. Partnership Agreement and Project Milestones

- Applicants selected for award under the Transformative Projects Program would enter into a partnership agreement with the Federal Government, which would specify the terms and conditions of the award, major milestones, and other key metrics to assess performance.

H. Value Sharing Structure for Capital Construction Track

- As a condition of receiving any financial assistance for a construction project under the capital construction track, an applicant would be required to include in its partnership agreement a value share agreement with the Federal Government. The terms of the value share agreement would vary by project based on the characteristics of the specific project and its projected revenue profile. Each agreement would provide the terms for the Federal Government to share in any project value.

I. Performance Monitoring and Oversight

- Given the innovation and substantial Federal support projects would receive under this program, the recipients would be required to publish performance information upon achieving milestones and upon project completion. The lead

Federal agencies also would conduct regular audits to ensure that funds were used for eligible costs.

IV. INFRASTRUCTURE FINANCING PROGRAMS

The below infrastructure financing proposals would dedicate $20 billion of the overall amount to advance major, complex infrastructure projects by increasing the capacity of existing Federal credit programs to fund investments and by broadening the use of Private Activity Bonds (PABs).

Of the appropriated funds, $14 billion would be made available for the expansion of existing credit programs to address a broader range of infrastructure needs, giving State and local governments increased opportunity to finance large-scale infrastructure projects under terms that are more advantageous than in the financial market. All funds remaining in credit programs ten years after enactment would be diverted to the Federal capital financing fund, to allow for efficient acquisition of real property.

The budgetary cost for the expansion of PABs would be $6 billion. These provisions would provide tools and mechanisms for market participants to invest in public infrastructure.

A. Expand Transportation Infrastructure Finance and Innovation Act (TIFIA) Funding and Broaden Program Eligibility

- Additional budget authority would be made available to DOT for subsidy costs under TIFIA. Specific funds set aside from the appropriated subsidy would be appropriated to DOT, notwithstanding Section 2001 of the Fixing America's Surface Transportation Act of 2015, and would remain available until end of Fiscal Year 2028.
- ***Support airport and non-Federal waterways and ports financing options.*** TIFIA currently limits project eligibility to those that are eligible for Federal assistance through existing surface transportation programs (highway projects and transit capital projects). Port and airport infrastructure enhancement and expansion projects across the United States do not have access to the credit assistance that is available via TIFIA for other types of transportation infrastructure projects, making it more difficult for project sponsors to pursue alternative project delivery for airports and to implement critical airport infrastructure improvements. Amending the project eligibility in the TIFIA statute to enable TIFIA to offer loans and other credit assistance to non-Federal waterways and ports and airport projects (such as renovated or new passenger terminals, runways, and related facilities) would incentivize project delivery for airports and ports and would accelerate overall improvements in airport and seaport infrastructure.

B. Expand Railroad Rehabilitation and Improvement Financing (RRIF) and Broaden Program Eligibility

- Additional budget authority would be made available to DOT for subsidy costs under RRIF. Specific funds set aside from the appropriated subsidy would be appropriated to DOT, notwithstanding Section 2001 of the Fixing America's Surface Transportation Act of 2015, and would remain available until end of Fiscal Year 2028.
- ***Subsidize RRIF for short-line freight and passenger rail.*** The current RRIF law does not provide specific subsidies or incentives for either short-line freight rail or passenger rail projects. A subsidy is not currently provided to cover the cost of the RRIF credit risk premium, so the project sponsor is always required to pay that amount at the time of the loan disbursement. The cost of the credit risk premium is often cited as one of the reasons that project sponsors, including those in the short-line freight rail and passenger rail sectors, are reluctant to pursue RRIF financing. Amending the law (45 U.S.C. 822) to provide a subsidy to cover the RRIF credit risk premium for short-line freight and passenger rail project sponsors would incentivize more project sponsors to pursue RRIF credit assistance for projects. This, in turn, would leverage more State and local funds for rail infrastructure development.

C. Expand Water Infrastructure Finance and Innovation Act (WIFIA) Funding and Broaden Program Eligibility

- Additional budget authority would be made available to EPA for subsidy costs under WIFIA, and the current lending limit of $3.2 billion would be removed. Specific funds set aside from the appropriated subsidy would be appropriated to the EPA, notwithstanding Section 5033 of the Water Infrastructure Finance and Innovation Act of 2014, and would remain available until end of Fiscal Year 2028.
- This proposal includes the following additional reforms to WIFIA:
  - ***Expand EPA's WIFIA authorization to include non-Federal flood mitigation, navigation and water supply.*** Currently, WIFIA is authorized for almost all types of water projects. While EPA has drought mitigation and stormwater mitigation authorities, it lacks authority for flood mitigation, hurricane and storm damage reduction, navigation, environmental restoration, and restoration of aquatic ecosystems (which has principally been within USACE's jurisdiction). This creates an unnecessary and arbitrary carve-out of integrated water projects to which EPA is unable to provide loans because those types of projects are not authorized by EPA, only by USACE. Amending the law (33 U.S.C. 3905) to include flood mitigation, navigation and water supply would allow EPA to service the full water cycle and provide one streamlined and integrated lending process to project sponsors.
  - ***Eliminate requirement under WIFIA for borrowers to be community water systems.*** Currently, a public authority that sells water directly to another water provider is not a community water system and is not eligible for WIFIA funding unless specific statutory authority is provided. Without explicit statutory eligibility, this type of public authority (e.g., a desalination

plant) is unable to receive WIFIA funding. Removing the restriction that requires borrowers to be "community water systems" instead of just "water systems" (33 U.S.C. 3905) would allow drinking water providers and other public authorities to participate in WIFIA and the Drinking Water State Revolving Fund (DWSRF) programs.

- ***Authorize Brownfield rehabilitation and cleanup of Superfund sites under WIFIA.*** Currently, only specific water sector projects are authorized under WIFIA. Brownfield and Superfund programs do not have access to a Federal lending program that requires large upfront funding and repayment based on later development. Broadening eligibility under WIFIA (33 U.S.C. 3905) to include remediation of water quality contamination by non-liable parties at Brownfield and Superfund sites would enable greater use of the program to address water quality issues. A separate account would be appropriate for individual eligibilities and ranking metrics because new revenues would be more speculative and would lower the leveragability ratio for all WIFIA loans.
- ***Reduce rating agency opinions from two to one for all borrowers.*** Current law requires borrowers to provide two opinion letters from rating agencies for WIFIA loans. Opinion letters can be expensive and time intensive for borrowers to obtain. Reducing from the number of required rating agency final opinions for borrowers (33 U.S.C. 3907) to allow for one opinion letter instead of two would reduce WIFIA borrowing costs for borrowers. At the same time, retaining agency authority to request two letters from a borrower under WIFIA would ensure continued protection of Federal interests and would minimize default risk when a project warrants a second letter.
- ***Provide EPA authority to waive the springing lien in certain lending situations.*** Currently, loans under WIFIA must have a springing lien in place. This is a problem when a project sponsor has outstanding senior debt obligations. Without a waiver to the springing lien requirement, the sponsor has to use more expensive debt, and WIFIA has less security in the special purpose vehicle. Amending the law (33 U.S.C. 3908(b)) to allow for a waiver of the WIFIA springing lien in certain instances similar to the TIFIA statute (23 U.S.C. 603(b)) (i.e., where a project has an A category rating, where the pledge is not dependent on project revenue, or where the borrower is a public sector borrower) would allow for the most efficient capital structure for agencies with existing senior debt.
- ***Increase the base level of administrative funding authorized to ensure EPA has sufficient funding to operate the WIFIA program.*** The current authorized administrative funds level for EPA was determined when WIFIA was a pilot program and may not be sufficient to cover both administrative costs and the fronting of underwriting costs, especially with our proposed expansion of WIFIA. Authorizing an administrative set-aside (33 U.S.C. 3912(b)) to an amount in line with similar programs would more accurately reflect the costs required to administer the WIFIA program and would allow for hiring appropriate staff for the oversight efforts associated with a larger portfolio.

- ***Remove the restriction on the ability to reimburse costs incurred prior to loan closing under WIFIA.*** A recent amendment to WIFIA restricts the WIFIA program's ability to reimburse costs incurred prior to loan closing. This amendment, part of the Water Infrastructure Improvements for the Nation Act (WIIN Act), attempts to ensure that costs incurred prior to loan closing may be considered eligible project costs. However, the WIIN amendment only allows non-WIFIA funds to reimburse the costs. Revising the law (33 U.S.C. 3908(b)) to provide that costs incurred prior to loan closing are eligible costs that can be covered by the WIFIA loan would prevent the borrower from having to raise significant sums of money prior to loan closing.
- ***Expand the WIFIA program to authorize eligibility for credit assistance for water system acquisitions and restructurings.*** Currently, projects only are allowed to access WIFIA for acquisitions of water systems prior to substantial completion, similar to TIFIA. This prevents WIFIA funds from being used for acquisition of water systems after they are completed, or substantially completed. Expanding WIFIA authorization (33 U.S.C. 3905) to allow for acquisitions and restructurings would enable WIFIA as a mechanism for consolidation in the water industry.
- ***Expand WIFIA authorization to include Federal deauthorized water resource projects.*** Currently, WIFIA is authorized for non-Federal water resource projects unless they are deemed Federal projects. Once deemed Federal, a project is no longer eligible for WIFIA borrowing, even if no Federal funding is used. This hinders the ability to incentivize non-Federal involvement for USACE projects. Authorizing USACE to defederalize water resource projects upon transfer of title and ownership from the Federal Government to a willing and capable non-Federal entity would enable WIFIA to be used for these projects.

D. Expand Department of Agriculture Rural Utilities Service (RUS) Lending Programs Funding

- Additional budget authority would be made available to the USDA for loan subsidy costs under RUS lending programs. Specific funds set aside from the appropriated subsidy would be made available to the USDA, notwithstanding applicable sections of the Agriculture Act of 2014, and would remain available until end of Fiscal Year 2028.

E. Create Flexibility and Broaden Eligibility to Facilitate use of Private Activity Bonds (PABs)

- These provisions would create flexibility and broaden eligibility to facilitate use of PABs to leverage financing for public-purpose infrastructure projects. These provisions also would allow for greater Federal leverage and therefore more efficient infrastructure improvements.

- ***Require public attributes for public infrastructure projects.*** In extending tax exemptions to private enterprises, tax benefits could go to purely private enterprises, which would not be beneficial to the public or a sound use of public tax benefits. Requiring public infrastructure projects to have the following public attributes would ensure the public nature of eligible infrastructure—
  - either State or local governmental ownership or private ownership under arrangements in which rates charged for services or use of projects are subject to State or local governmental regulatory or contractual control or approval; and
  - availability of projects for general public use (e.g., public roads) or provision of services to the general public (e.g., water service).

  For purposes of the governmental ownership alternative under the public attributes requirement, a new safe harbor would treat a project as governmentally owned when a State or local governmental unit leases the project to a private business provided that—
  - the term of the private lease is no longer than 95 percent (rather than 80 percent under the existing safe harbor) of the reasonably expected economic life of the project;
  - the private lessee irrevocably agrees not to take depreciation or investment tax credit with respect to the project; and
  - the private lessee has no option to purchase the project other than at fair market value.
- ***Broaden eligibility of PABs.*** Current law includes a limited list of exempt facilities eligible to be financed with tax-exempt bonds. Additionally, different categories of exempt facilities are subject to varying requirements, which restricts the usefulness of PABs. This limits the potential financing tools that can be used to facilitate performance-based infrastructure, both for a wide variety of transportation projects and other public-purpose infrastructure projects. The revised parameters would allow longer-term private leases and concession arrangements for projects financed with PABs. Amending the law (26 U.S.C. 142) to allow broader categories of public-purpose infrastructure, including reconstruction projects, to take advantage of PABs would encourage more private investment in projects that benefit the public. Allowing privately financed infrastructure projects to benefit from similar tax-exempt financing as publicly financed infrastructure projects would increase infrastructure investment. This proposal would expand and modify eligible exempt facilities for PABs to include the following public infrastructure projects.
  - Existing categories:
    - airports (existing category);
    - docks, wharves, maritime and inland waterway ports, and waterway infrastructure, including dredging and navigation improvements (expanded existing category);
    - mass commuting facilities (existing category);
    - facilities for the furnishing of water (existing category);
    - sewage facilities (existing category);
    - solid waste disposal facilities (existing category);

- Modified categories:
    - qualified surface transportation facilities, including roads, bridges, tunnels, passenger railroads, surface freight transfer facilities, and other facilities that are eligible for Federal credit assistance under title 23 or 49 (i.e., qualified projects under TIFIA) (existing category with modified description);
    - hydroelectric power generating facilities (expanded existing category beyond environmental enhancements to include new construction);
    - flood control and stormwater facilities (new category);
    - rural broadband service facilities (new category); and
    - environmental remediation costs on Brownfield and Superfund sites (new category).

- ***Eliminate the Alternative Minimum Tax preference on PABs.*** One reason why PABs have been underutilized is due to the punitive market interest rate effect of the Alternative Minimum Tax (AMT) tax preference on PABs, which adds an estimated 30-40 basis points (0.30-0.40 percent) yield premium to the borrowing rate for PABs compared to traditional governmental municipal bonds due to the more limited demand. This creates inconsistent premiums for service providers and disincentives for borrowers to use this financing mechanisms. Eliminating the AMT preference on PABs would lower borrowing costs and increase the utilization of PABs.
- ***Remove State volume caps and transportation volume caps on PABs for public purpose infrastructure projects and expand eligibility to ports and airports.*** Clean water and drinking water projects currently are subject to State volume caps for PABs, based on population. In recent years, as little as 1-1.5 percent of all exempt bonds were issued to water and wastewater projects. Exceptions from the volume cap currently are provided for other governmentally owned facilities such as airports, ports, housing, high-speed intercity rail, and solid waste disposal sites. Additionally, many performance-based infrastructure projects for transportation facilities described in 26 U.S.C. 142(m) have taken advantage of PABs, which allow private sector developers to benefit from similar tax-exempt subsidies provided to public sector borrowers. The law establishes a nationwide volume cap of $15 billion for these projects, to be allocated by the Secretary of Transportation.
    - These caps create uncertainty as to the availability of PABs in the future, as projects require long lead times for development, and no additional PABs may be issued for this type of facility once the cap has been exhausted.
    - Amending 26 U.S.C. 146 to remove the population-based volume cap applicable to PABs for public purpose infrastructure projects of the types covered by this proposal that have the requisite public attributes would level the playing field between public and private service providers.
    - Amending 26 U.S.C. 142(m) to eliminate the nationwide cap would provide certainty that PABs would be available to a project sponsor as it developed and evaluated a project's financial strategy. This provision would apply only if a State volume cap did not already apply.

- ***Provide change-of-use provisions to preserve the tax-exempt status of governmental bonds.*** Currently, when a public project is purchased by a private service provider, the tax-exempt status is eliminated when the private use limits on government bonds are exceeded. This creates a structural barrier to the private sector acquiring projects because that cost premium must be funded at closing. Adding change-of-use curative provisions (26 U.S.C. 150) to protect the tax-exempt status of governmental bonds in transactions involving private business use of projects financed with governmental bonds that otherwise would violate private business use limits on those bonds (e.g., private leases) would eliminate this private sector barrier. One curative action would allow alternative business use of the public project in a manner that would qualify as an infrastructure project eligible for a new issuance of PABs under the proposal. Another curative action would allow recycling of an amount equal to the total present value of a private lease of any project financed with governmental bonds into expenditures for governmental use within two years of the lease.
- ***Provide change-of-use cures for private leasing of projects to ensure preservation of tax exemption for infrastructure projects.*** Currently, Treasury regulations allow certain change-of-use remedial actions to preserve the tax exemption for the tax-exempt governmental bonds upon a violation of private business use restrictions. Existing remedial actions include: defeasance of the outstanding bonds, "recycling" amounts received to qualifying government uses within two years, or alternative use of a project in a way that would qualify for tax-exempt bonds (including PABs) if retested at the time of use. These change-of-use cures do not include private leasing as a remedial action that would preserve tax-exempt status of the bonds. Therefore, the private sector market participants are not able to access the tax-exempt debt market for public infrastructure. Providing for tailored change-of-use remedial actions that preserve the tax exemption status upon private leasing of projects subject to outstanding tax-exempt government bonds or allowing "recycling" the total present value of the private lease payments into public and governmental uses within two years would ensure the assets retain the tax-exempt status of the associated debt obligations.

V. PUBLIC LANDS INFRASTRUCTURE

The below public lands provisions would enable the additional revenues generated from energy development on public lands to pay for capital and maintenance needs of public lands infrastructure. The Department of the Interior (DOI) manages an extensive infrastructure asset portfolio. The infrastructure managed by the DOI includes approximately 100,000 miles of roads as well as dams, bridges, and irrigation and power infrastructure. Taking care of this significant asset portfolio is a persistent challenge. The National Park Service (NPS) has a deferred maintenance backlog of $11.3 billion, half of which is for roads, bridges and tunnels, and the U.S. Fish and Wildlife Service also has a deferred maintenance backlog of $1.2 billion. To address this infrastructure need, this provision would establish a new infrastructure fund in the U.S. Treasury entitled the Interior Maintenance Fund (Fund) comprised of additional revenues from the amounts due and payable to the United States from mineral and energy development on Federal lands and waters.

A. Establish Interior Maintenance Fund

- Currently, receipts generated from mineral and energy development on public lands are not available for capital and maintenance of public infrastructure.
- This limitation perpetuates the deferred maintenance backlog for public lands infrastructure.
- Allowing half of additional receipts generated by expanded Federal energy development to be deposited into the Fund would help the DOI address this backlog. Such receipts would be deposited into the Fund until the cumulative amount deposited had reached $18 billion.
- The receipts deposited in the Fund would be made available to the Secretary of the Interior, without fiscal year limitation, to address the deferred maintenance and capital needs for infrastructure in national parks and wildlife refuges.
- The DOI would use its capital asset management systems to prioritize projects, monitor implementation, and measure results.

VI. DISPOSITION OF FEDERAL REAL PROPERTY

The below provisions would establish authority to allow for the disposal of Federal assets to improve the allocation of economic resources in infrastructure investment.

A. Codify Accelerated Depreciation for the Disposition of Non-Federal Assets with a Federal Interest Due to Grant Receipt

- Currently, it is unclear which disposition actions utilities and municipalities may have undertaken with assets funded by Federal construction grants and earmarks. Prior to Executive Order 12803—Infrastructure Privatization (1992)—the federally funded share of any disposed asset was to be returned to Treasury.
- This lack of clarity results in project sponsors not understanding their responsibilities and benefits when disposing of federally funded assets and some sponsors choosing not to dispose of assets due to incorrect assumptions.
- Codifying Executive Order 12803 would allow accelerated depreciation for the disposition of non-Federal assets and application of those rules to any dispositions undertaken since issuance of the Executive Order. Directing the agencies to provide guidance on implementation also would provide clarity for utilities and municipalities when divesting or privatizing assets.

B. Streamline and Improve the Federal Real Property Disposal Process

- The current statutory disposal process for real property is governed primarily by title 40 of the United States Code, with many requirements that are burdensome and delay sale or disposal of federally owned assets.

- The Federal real property civilian inventory is comprised of facilities with an average age of 47 years, many of which are inefficient and outdated. Today, agencies require more flexible work environments; however, the Government largely is unable to tap into the value of the portfolio due to the current statutory limitations.
- Amending the statute to allow agencies to move property to market more quickly and retain the gross proceeds of sale would allow the Government to be more nimble and lower costs.
  - ***Allow the Government to take assets no longer needed by any Federal agency directly to market.*** Currently, title 40 of the United States Code requires agencies to screen a potential disposal for at least 12 public benefit conveyance requirements. State and local governments and certain non-profit institutions may acquire surplus real property at discounts of up to 100 percent for various types of public use. This process can take years to complete. Allowing the Government to take assets no longer needed by any Federal agency directly to market would allow any interested party to purchase assets at fair market value without any preferences or right of first refusal.
  - ***Retain proceeds for reinvestment in agency real property requirements.*** Under current law, most agencies lack retention of proceeds authority, and nearly all agencies with retention authority require an appropriation to access the funds. This creates a disincentive to agency disposition action and prevents reinvestment in mission-critical Federal facilities. Amending the statute to allow retention of proceeds and expenditure without future authorization or appropriation would allow agencies to take immediate action reinvesting in critical real property assets, reconfiguring space to improve utilization and lower costs, and disposing of additional unneeded assets. This provision also would allow proceeds to be retained without fiscal year limitation.
  - ***Expand the allowable uses of the General Services Administration (GSA) Disposal Fund.*** Current authority limits GSA assistance to other Federal agencies for those activities that occur after a report of excess (which highlights unneeded real property). GSA does not have authority to help agencies on activities that prepare for the report of excess, which inhibits the agencies' ability to dispose of assets. Additionally, agencies do not always complete these activities because agencies must fund them from their limited resources. Expanding authority to allow GSA to support activities that occur prior to the report of excess, including identifying, preparing, and divesting properties prior to the report of excess, would reduce the Federal footprint and allow more efficient asset management. Under this provision, the same account properties would remain, allowing GSA to recover costs from the gross proceeds prior to agency retention.
  - ***Eliminate the requirement to transfer funds above the identified threshold to the Land and Water Conservation Fund.*** Current non-GSA property disposal under title 40 requires a transfer to the Land and Water Conservation Fund. Eliminating the requirement to transfer funds above the identified

threshold to the Land and Water Conservation Fund would maximize the funds available to support disposition actions.

C. Authorize Federal Divestiture of Assets that Would Be Better Managed by State, Local, or Private Entities

- The Federal Government owns and operates certain infrastructure that would be more appropriately owned by State, local, or private entities.
- For example, the vast majority of the Nation's electricity needs are met through for-profit investor-owned utilities. Federal ownership of these assets can result in sub-optimal investment decisions and create risk for taxpayers.
- Providing Federal agencies authority to divest of Federal assets where the agencies can demonstrate an increase in value from the sale would optimize the taxpayer value for Federal assets. To utilize this authority, an agency would delineate how proceeds would be spent and identify appropriate conditions under which sales would be made. An agency also would conduct a study or analysis to show the increase in value from divestiture. Examples of assets for potential divestiture include—
  - Southwestern Power Administration's transmission assets;
  - Western Area Power Administration's transmission assets;
  - Ronald Reagan Washington National and Dulles International Airports;
  - George Washington and Baltimore Washington Parkways;
  - Tennessee Valley Authority transmission assets;
  - Bonneville Power Administration's transmission assets; and
  - Washington Aqueduct.

VII. FEDERAL CAPITAL FINANCING FUND

Before an agency can purchase real property, it must receive an appropriation for the full purchase price. The full appropriation scores in that year against the discretionary caps and against the maximum funding (the 302(b) allocation) that the Appropriations Subcommittee can provide. This is problematic for large-dollar, irregular acquisitions because they must compete with agency operating and programmatic expenses for the limited resources available. The below provisions would create a funding mechanism to address this issue.

A. Create Federal Capital Financing Fund

- Too often, tight spending limits mean that purchases are not funded, and agencies must resort to signing long-term leases. These are always more expensive to taxpayers over the long run because Treasury can always borrow at the lowest rate. Because rent is obligated one year at a time, the lease payments can fit within an agency's budget without disrupting other needs. In contrast, private firms and State and local governments budget for purchases of real property in separate capital budgets so that real property purchases do not compete with annual operating needs. Their system allows proposed purchases to be compared to each other and ranked such that the ones with the highest return on investment are funded within the total capital budget.

- This provision would create a funding mechanism that is similar to a capital budget but operates within the traditional rules used for the Federal budget by establishing a mandatory revolving fund to finance purchases of federally owned civilian real property. Of the total appropriation, $10 billion would be made available to capitalize the revolving fund. Upon approval in an Appropriations Act, the revolving fund would transfer money to agencies to finance large-dollar real property purchases. Purchasing agencies would then be required to repay the fund in 15 equal annual amounts using discretionary appropriations.
- As a result, purchases of real property assets would no longer compete with annual operating and programmatic expenses for the limited funding available under tight discretionary caps. Instead, agencies would pay for real property over time as the property were utilized. The repayments would be made from future appropriations, which would provide an incentive to select projects with the highest return on investment, including future cost avoidance. The repayments also would replenish the revolving fund so that real property could continually be replaced as needed.

PART 2—ADDITIONAL PROVISIONS FOR INFRASTRUCTURE IMPROVEMENTS

I. TRANSPORTATION

These provisions would incentivize and remove barriers to the development and improvement of transportation infrastructure in our Nation. These provisions would encourage and incentivize alternative project delivery, including State, tribal, local and private investment, in transportation; streamline Federal procedures for delivering transportation projects; and decrease barriers and reduce unnecessary Federal oversight to facilitate timely delivery of projects. This renewed investment in transportation would strengthen our economy, enhance our competitiveness in world trade, create jobs and increase wages for our workers, and reduce the costs of goods and services for our families.

A. Financing

1. *Provide States Tolling Flexibility*

- ***Provide States flexibility to toll on Interstates and reinvest toll revenues in infrastructure.*** Currently, Federal law allows tolling Interstates in limited circumstances. Tolling restrictions foreclose what might otherwise serve as a major source of revenue for infrastructure investment. Providing States flexibility to toll existing Interstates would generate additional revenues for States to invest in surface transportation infrastructure. Current requirements that States must reinvest toll revenues in infrastructure would continue to apply.

- ***Reconcile the grandfathered restrictions on use of highway toll revenues with current law.*** Toll facilities that received Federal approval under the Surface Transportation and Uniform Relocation Assistance Act of 1987 (STURRA) may use toll revenues only for the construction, reconstruction, operation, and debt service of the toll facility itself. Current law, however, allows other toll facilities to use toll revenues (in addition to the costs noted above) on other title 23 projects. The tighter restrictions, specific to the STURRA toll facilities, prevent some States from devoting existing toll revenues to other critical highway projects. Adjusting the STURRA "use of revenues" provisions to align with current toll authorities would free these resources and allow other critical highway projects to go forward.

2. *Extend Streamlined Passenger Facility Charge Process from Non-hub Airports to Small Hub Airports*

- Current law (49 U.S.C. 40117) outlines the application process to impose passenger facility charges (PFCs), as well as the approval process and pilot program for alternative procedures. Small, medium, and large hub airports must provide extensive documentation in PFC applications to demonstrate the eligibility, justification, objective, project costs, significant contribution (large and medium hubs) and other requirements. The streamlined non-hub process requires reduced information, primarily relating to project descriptions and costs.
- Current law creates an unreasonable burden on small hub airports filing PFC applications.
- Extending the streamlined PFC process to small hub airports would allow these airports to more readily fund needed development as well as reduce delays and unnecessary requirements in the PFC process.

3. *Provide States Flexibility to Commercialize Interstate Rest Areas*

- Federal law prohibits most commercial activity within the Interstate right-of-way, including at Interstate rest areas.
- This limits infrastructure investment opportunities and the ability to generate revenues to operate and maintain Interstates.
- Amending the law (23 U.S.C. 111) to provide States flexibility to commercialize Interstate rest areas, and requiring the revenues to be reinvested in the corridor in which they are generated, would support new infrastructure investment. States would not be permitted to charge fees for essential services such as water or access to restrooms.

4. *Provide New Flexibility for Transportation Projects with De Minimis Federal Share*

- Under current law, even when a State or private sector entity provides the majority of the funding for a project, it still must seek review and approval under the laws of any Federal agency with jurisdiction.

- The additional procedures, costs and time delays associated with Federal requirements discourage infrastructure investments by State and local entities and private investors. Federal requirements also contribute to unnecessary delays in delivering needed projects even when the Federal interest is small.
- Amending titles 23 and 49 to provide targeted flexibility pertaining to the application of Federal requirements where the project funding is primarily non-Federal and the Federal share is minimal would increase investments in infrastructure and reduce project delays and costs.

5. *Expand Qualified Credit Assistance and Other Capabilities for State Infrastructure Banks*

- State infrastructure banks (SIBs) currently are underutilized.
- This underutilization can inhibit State and local governments from best directing Federal funds to infrastructure projects.
- Providing incentives to use SIBs, such as reducing federalization requirements on funds lent to SIBs that are deployed locally, could encourage the use of SIBs. Expanding the legal capabilities of SIBs, in addition to direct appropriations, would allow SIBs to take responsibility for infrastructure funding in an effective manner that may not be possible for the Federal Government, particularly for rural projects or projects of smaller total cost.

B. Highways

1. Authorize Federal Land Management Agencies to Use Contracting Methods Available to States

- Current law authorizes State departments of transportation (State DOTs) and local governments to use a range of commonly used project delivery methods (e.g., electronic bidding, bridge bundling, project bundling, construction manager-general contractor), but does not authorize Federal Land Management Agencies (FLMAs) to use these same methods—even when the FLMAs are delivering projects with title 23 funds.
- This constrains FLMAs' procurement options, which in some cases increases the cost or timeline for delivering Federal lands highway projects.
- Expanding to FLMAs all title 23 contracting methods (for projects funded with title 23 funds) would enable more efficient delivery of these projects.

2. *Raise the Cost Threshold for Major Project Requirements to $1 Billion*

- Current law (23 U.S.C. 106(h)) defines a major project as any project that receives Federal financial assistance and has an estimated total project cost of $500 million or more. Financial plans and project management plans must be submitted to the Federal Highway Administration (FHWA) for all major projects.

- For projects that are routinely managed by FHWA and State DOTs, these requirements do very little to ensure the success of the project. Instead, the requirements create an administrative burden that wastes resources and delays project delivery.
- Amending the law to raise the threshold for major projects from $500 million to $1 billion would remove unnecessary oversight requirements from smaller, less complex projects that are routinely managed by FHWA and State DOTs.

3. *Authorize Utility Relocation to Take Place Prior to NEPA Completion*

- Current law requires any utility relocation to occur after completion of the NEPA review process. Utility relocation is similarly restricted for transit projects.
- Most projects with pre-construction activities include utility relocation, which typically is a long lead item that cannot start until NEPA is completed. This contributes to construction delays and cost escalation.
- Amending the law to allow utility relocation to take place prior to NEPA completion would streamline the building process, reduce overall construction time, and lower costs. Under this proposal, appropriate limitations would be included to ensure the integrity of the NEPA process, such as making the reimbursement of costs incurred dependent on the selection of an alternative that requires the utilities to be relocated. Relocation costs only would be reimbursed if a project were completed.

4. *Authorize Repayment of Federal Investment to Eliminate Perpetual Application of Federal Requirements*

- Projects that use of Federal-aid highway funds for the construction of a highway or bridge are constrained by Federal requirements. Many of these requirements continue to apply to the facility after the project is complete. These requirements include restrictions on tolling; requirements pertaining to the location of a commercial plaza within the right-of-way of an Interstate highway; restrictions on Interstate access; and compliance with size and weight standards, highway beautification standards, and high occupancy vehicle lane operation standards.
- These perpetual Federal requirements can inhibit a State's ability to obtain value from the facility and have flexibility with respect to its future operations and maintenance. In the past, whenever a State wished to be released from the application of these requirements, Congress enacted a specific statutory provision that permitted the State to refund the Federal investment in that facility. Upon repayment of Federal funds, the State was relieved of compliance with the Federal requirements that attached to the facility.
- Amending the law to provide general authority for States to repay the Federal investment in a facility would provide States with the ability to obtain value from their assets and flexibility in how their highways and bridges are operated and maintained. The repayment of Federal funds invested in a facility would be

the actual amount of Federal investment, unadjusted for inflation. Any funds repaid in this manner would be credited to the Highway Trust Fund, and the State would receive an equal amount of funding (available for obligation) under the Surface Transportation Block Grant Program.

5. *Provide Small Highway Projects with Relief for the Same Federal Requirements as Major Projects*

- Currently, some smaller scale projects (e.g., those typically eligible for transportation alternatives) funded under the Surface Transportation Block Grant Program must be treated as major highway projects, even if they are not located within the right-of-way of a Federal-aid highway (23 U.S.C. 133).
- This means that smaller, simpler projects that could be implemented and open to the public quickly often are delayed by lengthy procurement procedures and Federal requirements that are more appropriate for larger, more complex projects.
- Amending this requirement for smaller projects that predominantly are outside the Federal-aid highway right-of-way would eliminate Federal procurement requirements for these infrastructure projects. This would allow States to use their own procedures to implement these projects.

C. Transit

1. *Require Value Capture Financing as Condition of Receipt of Transit Funds for Capital Investment Grants*

- Federal programs for transit capital projects do not require value capture financing. Current law includes a broad definition of "value capture" to mean "recovering the increased property value to property located near public transportation resulting from investments in public transportation." (49 U.S.C. 5302(24)). Value capture can include joint development, land value taxes, tax increment financing, special assessment districts, transportation utility fees, development impact fees, negotiated extractions, transit oriented development, and air rights.
- Failure of transit authorities to use value capture financing reduces funds available for transit capital projects.
- Amending the law to include value capture financing as a prerequisite for Section 5309 Capital Investment (Discretionary) Grants, excluding Small Starts projects, would increase resources available for transit capital projects and decrease dependence on Federal grant programs for continued development.

2. *Eliminate Constraints on Use of Public-Private and Public-Public Partnerships in Transit*

- Current law (49 U.S.C. Chapter 53 and its implementing regulations) impedes the greater use of public-private and public-public partnerships in transit capital projects.
- These constraints reduce the funds available for transit capital projects.
- Eliminating these constraints would encourage greater investment in transit capital projects.

3. *Codify Expedited Project Delivery for Capital Investment Grants Pilot Program*

- Currently, the Federal Transit Administration's (FTA) framework for public-private partnerships is a non-codified pilot program limiting the number of projects eligible to participate and capping the Federal share at 25 percent (Section 3005(b) of the FAST Act). The program also requires participants to utilize existing union staff.
- The current pilot program is structured to offer participants a more streamlined approach to the full-funding grant agreement approval process and broader authority to proceed with construction. These attributes are appealing to potential concessionaires and State and local jurisdictions. However, the constraints placed on the program undermine the goals of expediting project delivery.
- Codifying the pilot program, ensuring it is allowable for all Capital Investment Grant projects and not just on a pilot basis, and increasing the Federal share to 50 percent would attract increased private investment and further expedite project delivery.

D. Rail

1. *Apply FAST Act Streamlining Provisions to Rail Projects and Shorten the Statute of Limitations*

- The FAST Act directed DOT to review all previously enacted highway permit reforms and project streamlining procedures under title 23 and to apply them to railroad projects under jurisdiction of the DOT.
- This created a discrepancy between a two-year statute of limitations for rail projects and a 150-day statute of limitations for transit and highway projects. In addition, this created a discrepancy between railroad projects administered by DOT and many large railroad projects administered by agencies other than the DOT (e.g., USACE and the United States Coast Guard) which are not subject to the FAST Act streamlining provisions under title 23.
- Amending the law to clarify that all rail projects, regardless of lead Federal agency, can take advantage of FAST Act streamlining provisions would help expedite rail project delivery. Amending the statute of limitations from two years to 150 days for rail projects would make the time frame for legal challenges on rail projects consistent with those for transit and highway projects.

E. Airports

1. *Create More Efficient Federal Aviation Administration Oversight of Non-aviation Development Activities at Airports*

- The Federal Aviation Administration (FAA) has conducted long-standing reviews of projects other than critical airfield infrastructure (including terminals, access and service roads, hangars, and other types of facilities) (based on statutory requirements set forth in 49 U.S.C. Chapter 471, particularly Sections 47102-47113 and Section 50101).
- This burdens FAA to review projects other than critical airfield infrastructure, and as a result, slows project delivery.
- Amending the law (49 U.S.C. 47107) to limit FAA approval and oversight of non-aviation development activities at airports would create more efficient FAA oversight of critical airfield infrastructure.

2. *Reduce Barriers to Alternative Project Delivery for Airports*

- Current law (49 U.S.C. 47134) provides that, under an existing pilot program, 65 percent of carriers at an airport must approve privatization to privatize an airport. The current pilot program is limited to only 10 airports, including only one large hub airport.
- The pilot program allows individual air carriers to overturn an airport's desire to privatize, blocking private investments in airports.
- Removing the limitation on the number and size of airports that can participate in the pilot program and decreasing the percentage of airlines needed to approve privatization from 65 percent to a majority vote would reduce barriers to alternative project delivery for airports and provide more flexibility for carriers to approve privatization.

3. *Clarify Authority for Incentive Payments under the Airport Improvement Program*

- Currently, the Airport Improvement Program (AIP) does not allow incentive payments for accelerated construction.
- This adds time to AIP projects, since they cannot pay for accelerated completion.
- Clarifying the authority under the AIP (49 U.S.C. 47110) to permit additional financial incentives, along with profit margin, for contractors would increase work efficiency and reduce project completion times.

4. *Move Oversight of AIP Funds to Post-expenditure Audits*

- Current law (49 U.S.C. 47104-47106) requires FAA to review and approve grant applications under the AIP.

- This oversight sometimes causes delays in sponsors receiving funds assigned to their airports.
- Revising the statutory requirements for AIP to shift FAA oversight from grant applications to post-expenditure audits would expedite conveyance of funds to sponsors.

II. WATER INFRASTRUCTURE

The below water infrastructure provisions would incentivize the development of effective and efficient water infrastructure, outcome-based procurement, and full life-cycle asset management to improve water infrastructure. These changes would provide greater flexibilities for USACE and its non-Federal partners to use available Federal and non-Federal funds, generate new revenues and retain certain revenues in support of project requirements, make greater use of contributed funds, and allow for innovative use of contracting tools.

A. Financing

1. *Authorize Clean Water Revolving Fund for Privately Owned Public-purpose Treatment Works*

- Current law allows the DWSRF to lend to private owners. However, the Clean Water State Revolving Fund (CWSRF) is generally restricted to publicly owned wastewater projects.
- Privately owned public-purpose treatment works are not eligible for CWSRF funding at the Federal level.
- Authorizing the CWSRF (33 U.S.C. 1383) to provide financial assistance to publicly owned and privately owned public-purpose treatment works would make more funding available for treatment works.

2. *Provide New Flexibility for Water Projects with De Minimis Federal Share*

- Under current law, even when a State or private sector entity provides the majority of the funding for a project, a project must still obtain review and approval under the laws of any Federal agency with jurisdiction.
- The additional procedures, costs, and time delays associated with Federal requirements discourage infrastructure investments by State and local entities and private investors. These legal restrictions also contribute to delays in delivering needed projects even when the Federal interest is small.
- Amending the law to provide targeted flexibility pertaining to the application of Federal requirements where the project funding is primarily non-Federal and the Federal share is minimal would increase investments in water infrastructure and reduce project delays and costs.

B. Water Programs

1. *Provide EPA Infrastructure Programs with "SEP-15" Authorizing Language*

- Currently, the EPA Administrator has limited authority to test and experiment within its programs.
- This limits the EPA's ability to explore new approaches that might increase project management flexibility, increase innovation, improve efficiency, assure timely project implementation, and develop new revenue streams.
- Providing the EPA Administrator authority (similar to 23 U.S.C. 502) to encourage tests and experimentation in the water projects development process to permit the Administrator to explore alternative and innovative approaches to the overall project development process and to develop more effective approaches to project planning, project development, finance, design, construction, maintenance, and operations.

2. *Apply Identical Regulatory Requirements to Privately Owned Public-purpose Treatment Works and Publicly Owned Treatment Works*

- Currently, different requirements may apply to privately versus publicly owned treatment works.
- This creates an unnecessary market distortion that puts private treatment works under more stringent and costly regulatory requirements than public sector equivalents, despite both serving public communities.
- Modifying the Clean Water Act to ensure identical requirements apply to privately owned public-purpose treatment works and privately owned treatment works would provide a level playing field for all service providers.

C. Inland Waterways

1. *Expand Authority Related to Non-Federal Construction and Operation of Inland Waterways Projects*

- Currently, Congress individually authorizes inland waterways projects to be constructed, maintained and operated by USACE. Only USACE is authorized to use funds appropriated from the Inland Waterways Trust Fund (IWTF) or from the General Fund (GF) of the Treasury for construction, repair, rehabilitation, maintenance, and operation of inland waterways projects. Fuel taxes paid by commercial users of the inland waterway system contribute to the IWTF, which pays for 50 percent of construction and major rehabilitation on the system, with the rest coming from the General Fund; once completed, project maintenance and operations are entirely paid for from the General Fund.
- This means that only USACE can perform construction and operations, even if there is a less costly alternative. In addition, this constrains projects to USACE operational capacity limits, which has resulted in a backlog of projects and deferred maintenance, lower operational effectiveness, and increased down time of waterway assets.

- Authorizing the Secretary of the Army to execute agreements with non-Federal public or private entities to use IWTF and GF funds for construction, repair, rehabilitation, maintenance and operation activities, and the ability to enter into third party contracts, concessions, and operating agreements, would enable greater innovation and efficiency by allowing non-Federal entities a greater role in performing work on these projects.

D. Water Infrastructure Resources

1. *Authorize User Fee Collection and Retention under the WRRDA Section 5014 Pilot Program and Recreation User Fees for Operation and Maintenance of Public Facilities*

- Currently, neither the Federal Government nor non-Federal service providers have authority to impose user fees under the water infrastructure pilot program authorized under Section 5014 of the Water Resources Reform and Development Act (WRRDA) of 2014. When user fees are permitted, they are sent to Treasury once collected, not returned to operate and maintain the site from which they were generated.
- Without a dedicated revenue source, innovative partnerships are nearly impossible to execute because third parties would be subject to appropriation risk. This risk makes transactions uneconomical and highly unlikely to close. Aging infrastructure at USACE-managed recreation sites is in need of significant repair and rehabilitation, and annual USACE appropriations have not been sufficient to address long-term operation and maintenance needs and safety concerns.
- Authorizing the Federal Government and third party service providers to impose and retain fees under WRRDA to use or defray costs associated with carrying out a project would enable effective infrastructure partnerships. This proposal would limit application to no more than ten projects and would specify that the respective non-Federal interests indemnify and hold the Federal Government harmless as a result of non-Federal actions, including that the Federal Government assumes no responsibility for costs of said non-Federal actions. Amending the law (16 U.S.C. 460d-3) to provide USACE the authority to retain recreation user fees generated at USACE-managed recreation sites and facilities would enable USACE to address the backlog of infrastructure, public safety and visitor use management needs at sites where user fees are collected.

2. *Expand U.S. Army Corps of Engineers' Authority to Engage in Long-term Contracts*

- Current law generally restricts the award of multi-year contracts to a period of no more than five years.
- Infrastructure asset contracts typically are much longer than five years, and therefore the cost and risk associated with five-year contracts creates a cost and resource prohibitive barrier to successful transactions.

- Extending the contract period to allow the Secretary of the Army to enter into contracts for a period up to 50 years would enable USACE to enter into long-term contracts that encompass the full life-cycle management of infrastructure assets in the program (Section 5014 of WRRDA). This amendment would specify that the respective non-Federal interests indemnify and hold the Federal Government harmless as a result of non-Federal actions, including that the Federal Government assumes no responsibility for costs of said non-Federal actions.

3. *Authorize Commercial Operation and Maintenance Activities at Hydropower Facilities*

- Current law defines operation and maintenance activities at hydropower facilities undertaken by Civil Works personnel as of the date of enactment of the Water Resources Development Act of 1990 as inherently governmental and not commercial activities. (Section 314 of the Water Resources Development Act of 1990; 33 U.S.C. 2321).
- This designation creates unnecessary bureaucracy and restricts open competition that leads to excess costs for operations that can easily be done at a lower cost and more efficiently.
- Amending the law to restore the authority of the Secretary of the Army to determine whether operation and maintenance functions at hydropower facilities on USACE projects are commercial activities and appropriate for performance by non-Federal entities would increase the opportunity for open competition and lead to more efficient operations and maintenance.

4. *Deauthorize Certain Federal Civil Works Projects*

- Currently, all USACE projects remain authorized in perpetuity. This includes completed projects that are under USACE control but are approaching the end of their service life, as well as projects that were built by USACE but are operated and maintained by non-Federal entities. Extensive regulatory and statutory compliance provisions apply to non-Federal sponsors associated with USACE projects, including Section 14 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. 408, commonly referred to as "Section 408").
- These provisions can make local alterations to federally constructed projects expensive and difficult, as even simple modifications to a Federal project by an applicant trigger a Section 408 review, which increases the costs to both the Government and the applicant.
- Amending the law to establish a streamlined deauthorization process that allows for those USACE projects approaching the end of their service life and for those projects operated and maintained by non-Federal interests that do not require Federal oversight would release Federal and non-Federal resources to be used for other purposes.

5. *Expand Authority for Acceptance of Contributed and Advanced Funds*

- A non-Federal sponsor can provide non-Federal funds to the Federal Government through contributed and advanced funds, to advance investments in infrastructure. However, under current law, the process to accept contributed and advanced funds is protracted and limited by several factors.
- Projects therefore suffer years of delay, unable to take full benefit of a willing sponsor to provide non-Federal funds.
- Amending the law (33 U.S.C. 701h) to expand authority for the acceptance of contributed funds even if no Federal funds have been appropriated for the authorized project, changing individual notifications to an annual reporting requirement, and expanding applicability of advanced funds authority to all authorized water resources development studies and projects would increase non-Federal spending and expedite project execution.

6. *Amend Water Resources Development Act to Allow for Waiver of Cost Limits*

- Current law provides a maximum total cost for congressionally authorized projects.
- Projects that exceed the cost limitation (Section 902 of the Water Resources Development Act of 1986) require authorization by Congress to raise the maximum total project cost, which can add significant delays in delivering infrastructure projects.
- Amending the law to allow the maximum total cost limitation to be waived upon the recommendation of the Secretary of the Army would provide flexibility to avoid delays in delivering infrastructure projects.

III. VETERANS AFFAIRS

The following provisions would provide flexibility to the Department of Veterans Affairs (VA) to use the value of its existing assets to provide our Nation's veterans the state-of-the-art facilities they deserve. The VA has a nationwide physical footprint that includes aging facilities. While the physical assets owned by the VA are growing outdated, the underlying property values continue to increase.

A. Provide VA Real Property Flexibilities

- ***Authorize VA to retain proceeds from sales of properties and exchange existing facilities for construction of new facilities.*** Under current law, the VA cannot retain the proceeds from sales of its properties, nor can the VA exchange its existing facilities for the construction of new facilities. This hinders the VA's ability to make needed capital improvements, including new construction and renovations. Authorizing the VA to retain proceeds from sales of its properties and exchange its existing facilities or land for new construction would provide the VA flexibility to better fulfill its mission, including making capital improvements for new construction and renovations and for funding lease or service costs in a facility.

- ***Authorize pilot program for VA to exchange land or facilities for lease of space in multi-tenant facilities.*** Congress should create a pilot program, for up to five projects, to allow the VA to exchange existing VA land or facilities for a lease of space in a resulting private facility built on the former VA land. The VA-occupied space would be built to the same commercial standards as the remainder of the facility and could be in a stand-alone building or part of another building. The private sector financing could not be based on the full faith and credit of the U.S. Government or guaranteed U.S. Government tenancy. The lease term after credits would be a maximum of seven years, and any future lease or extension after the initial term also would be limited to seven years. The lease and service rates during the credit timeframe and any subsequent lease term would be at market or less. The explicit dollar amount of termination (e.g., one year of rent payments) would be required to be included in the agreement, and VA would budget rent and termination in accordance with OMB Circular A-11. The lease would be structured to assure that VA had exit privileges, and that VA would have an exclusive right, but not the obligation, to renew or extend the term of the lease.
- ***Increase the threshold above which VA is require to obtain congressional authorization for leases.*** Current law requires VA to obtain congressional authorization for any lease above $1 million in annual costs. This differs from the GSA prospectus threshold established under title 40 of the United States Code. The GSA prospectus currently carries a threshold of $3.095 million and is reevaluated periodically. These differing thresholds require the VA to seek authorization for more leases. Increasing the authorization threshold for VA major medical leases (38 U.S.C. 8104) from the current threshold of $1 million in annual costs to the current GSA prospectus threshold which is $3.095 million and updated periodically would reduce the number of VA authorizations and align the authorization levels across the two programs.

IV. LAND REVITALIZATION (BROWNFIELD/SUPERFUND REFORM)

The below provisions would expand funding eligibility for revitalization projects and establish tools to manage and address legal and financial risks. These provisions would incentivize the development and dissemination of strong infrastructure risk mitigation and asset management standards to accelerate the desired transformational shifts for the public good—increases in revenue generation, risk allocation to the parties best equipped to mitigate concerns, and greater attention to maintenance and innovative design.

A. Create a Superfund Revolving Loan Fund and Grant Program and Authorize National Priorities List Sites to be Eligible for Brownfield Grants

- Currently, the Brownfield program has a revolving loan/grant fund, but under CERCLA Sections 101(39)(B) and 101(41)(C), Superfund sites are not eligible for the program. National Priorities List (NPL) sites currently are not eligible for Brownfield grants.

- Therefore, low interest loan funds are not available to clean up Superfund sites and because NPL sites cannot access Brownfield grants, they cannot fund any development unrelated to the response action.
- Amending the Small Business Liability Relief and Brownfields Revitalization Act to include a Superfund revolving fund would facilitate new investment into Superfund cleanup and reuse and would provide non-liable third parties a low interest source of funds to perform removals, remedial design, remedial action and long-term stewardship. Amending the law (CERCLA Section 101(40)) to allow NPL sites or portions thereof to be eligible for Brownfield grants at EPA's discretion would make funds available to eligible entities to conduct assessments, complete cleanups, and implement remedy enhancements to accommodate development and perform long-term stewardship. This proposal would include areas of the NPL site that are not related to the response action; areas that can be parceled out from the NPL response action; areas where the NPL response action is complete but the site has not been delisted yet; or areas where the NPL response action is complete but the facility is still subject to orders or consent decrees under CERCLA. This would be a new Brownfields grant program targeted to Superfund sites.

B. Provide Liability Relief for States and Municipalities Acquiring Contaminated Property through Actions as Sovereign Governments

- Currently, State and local governments may be exempt from CERCLA liability as an "owner or operator" if they acquire ownership or control of contaminated property involuntarily through bankruptcy, tax delinquency, abandonment, or other circumstances under which the State or local government involuntarily acquires title by virtue of its function as a sovereign government.
- However, confusion exists regarding the meaning of "a unit of State or local government," "involuntary acquisition," and "acquires title by virtue of its function as sovereign," which inhibits State and local governments from becoming full partners in the cleanup and reuse of Superfund sites.
- Clarifying and expanding the current liability exemption (CERCLA Section 101(20)(D)) to afford State and local governments an exemption from liability for all property acquisitions undertaken by virtue of their sovereign function would encourage these entities to become full partners in the cleanup and reuse of Superfund sites. Additionally, these changes would allow more State and local governments to be eligible for grants and to acquire property without fear of liability. Such relief from liability would be conditioned upon State and local governments not contributing to the contamination and meeting the obligations imposed on Bona Fide Prospective Purchasers (BFPPs) in Section 101(40)(C)-(G), including exercising appropriate care with respect to releases of hazardous substances at the facility.

C. Provide EPA Express Settlement Authority to Enter into Administrative Agreements

- Currently, CERCLA does not provide express authority for EPA to enter into certain administrative settlement agreements to clean up and reuse sites. EPA does not have express authority to settle with BFPPs or other third parties who may be subject to a statutory defense or exemption or to settle administratively with a potentially responsible party who is willing to perform remedial action. CERCLA (Section 122(a)) provides the President with authority to enter into an agreement with any person to perform a response action when the President determines the action will be done properly. CERCLA further requires that when EPA enters into a settlement for a remedial action with a potentially responsible party, the settlement must be approved by the Attorney General and entered into the United States District Court as a consent decree.
- CERCLA limitations hinder the cleanup and reuse of Superfund sites and contribute to delays in cleanups due to negotiations.
- Amending the law to provide EPA with express settlement authority to enter into administrative agreements with BFPPs and other statutorily protected parties and to enter into administrative agreements with any party to perform remedial action in appropriate circumstances (e.g., partial, early remedial action) would promote and expedite the cleanup and reuse of Superfund sites.

D. Integrate Cleanup, Infrastructure and Long-term Stewardship Needs by Creating Flexibility in Funding and Execution Requirements

- CERCLA and appropriations laws restrict EPA's ability to creatively integrate cleanup, rebuilding infrastructure, and long-term stewardship. Additionally, EPA is subject to a number of restrictions on its ability incorporate infrastructure needs into cleanup design and implementation, particularly with respect to coordinating funding of such activities.
- These restrictions prevent EPA from incorporating infrastructure needs into cleanup design and implementation.
- Removing these restrictions for infrastructure projects that could easily be integrated with the cleanup work and funded by a third party, would enable EPA to better incorporate infrastructure needs (e.g., pipelines, power lines) into cleanup design and implementation and would promote site reuse.

PART 3—INFRASTRUCTURE PERMITTING IMPROVEMENT

I. FEDERAL ROLE

The below provisions would protect the environment while at the same time delivering projects in a less costly and more time effective manner by:

- creating a new, expedited structure for environmental reviews;
- delegating more decision-making to States and enhancing coordination between State and Federal reviews; and
- authorizing pilot programs through which agencies may experiment with innovative approaches to environmental reviews while enhancing environmental protections.

A. Establishing a "One Agency, One Decision" Environmental Review Structure

1. *Protect the Environment through a Structure that Establishes Firm Deadlines to Complete Environmental Reviews and Permits*

- Under current law, project sponsors of infrastructure projects must navigate environmental reviews under the National Environmental Policy Act (NEPA) and permitting processes with multiple Federal agencies with separate decision-making authority and often counter-viewpoints. These many hoops affect the ability of project sponsors to construct projects in a timely and cost effective manner.
- This creates inefficiencies in project environmental protection, review and permitting decisions, which delays infrastructure investments, increases project costs, generates uncertainty, and prevents the American people from receiving the benefits of improved infrastructure and environmental protections in a timely manner.
- This proposal would establish a firm deadline of 21 months for lead agencies to complete their environmental reviews through the issuance of a Finding of No Significant Impact (FONSI) or Record of Decision (ROD), as appropriate.
- Additionally, the proposal would establish a firm deadline of 3 months after the lead agency's FONSI or ROD for Federal agencies to make decisions with respect to the necessary permits. (This 3-month deadline also would apply to any permits issued by State agencies under Federal law pursuant to delegations of authority from a Federal oversight agency where such permits are a prerequisite to the completion of a Federal agency's ability to issue a permit.) Appropriate enforcement mechanisms would be established to ensure that permit decisions are issued.

B. Reducing Inefficiencies in Environmental Reviews

1. *Require a Single Environmental Review Document and a Single Record of Decision Coordinated by the Lead Agency*

- Currently, Federal NEPA reviews are conducted by the Federal agencies with jurisdiction over the same project. Agencies are encouraged, but not required, to prepare joint analyses. Requiring joint analyses can reduce the potential for delay caused by separate analyses.
- When not coordinated, these reviews can be duplicative and difficult for a project sponsor to navigate. Decisions are not issued in the same time frame and frequently are spread out over long periods of time. This additional time can add months, or even years, to the environmental review process, with little benefit to the environment.
- Requiring the lead Federal agency under NEPA to develop a single Federal environmental review document to be utilized by all agencies, and a single ROD to be signed by the lead Federal agency and all cooperating agencies, would reduce duplication and create a more efficient, timely review process.

2. *Clarify that Alternatives Outside of the Scope of an Agency's Authority or Applicant's Capability Are Not Feasible Alternatives*

- The heart of the NEPA process is the evaluation of alternatives. The development, analysis, and weighing of alternatives serves to ensure that Federal officials make informed decisions.
- However, an agency should not be required to consider alternatives that are outside its authority or outside the capability of the applicant. Such alternatives are not feasible and do not need to be considered in an environmental review.
- Clarifying that alternatives outside the scope of an agency's authority or an applicant's capability are not feasible alternatives for purposes of NEPA would allow agencies and applicants to focus their resources and analyses on those alternatives that are actually legally, technically, and economically feasible.

3. *Direct the Council on Environmental Quality to Issue Regulations to Streamline the NEPA Process*

- Council on Environmental Quality (CEQ) regulations and guidance provide an important basis for the implementation of NEPA. The environmental review process under NEPA as it exists today is lengthy, inefficient, and costly.
- CEQ's regulations were issued in 1978, before the advent of the Internet, and have been subject to only one revision since then.
- Requiring CEQ to revise its regulations to streamline NEPA would reduce the time and costs associated with the NEPA process and would increase efficiency, predictability, and transparency in environmental reviews.

4. *Eliminate Redundancy in EPA Reviews of Environmental Impact Statements under Section 309 of the Clean Air Act*

- Currently, Section 309 of the Clean Air Act requires that EPA review and publish comments on most Environmental Impact Statements (EISs) (42 U.S.C. 4332).

Under this authority, EPA publishes comments on draft and final EISs. EPA also provides a rating for EISs. In addition to its responsibility under Section 309, EPA has a separate regulatory responsibility to review and comment on EISs on matters within its jurisdiction and typically would be included as a cooperating agency for areas within its technical expertise.
- The extra review under Section 309 adds a step to the environmental review process that can cause delays without increasing protection to the environment. Issues are sometimes raised late in the process or go beyond the bounds of EPA's subject matter expertise. Lead Federal agencies must take time to respond to EPA's additional comments in the Section 309 review, even if the comments are outside of EPA's special expertise. This review is no longer necessary, given that Federal agencies have gained significant NEPA experience since this law was enacted and because EPA has other authority to review and comment on matters within its jurisdiction.
- Eliminating EPA's additional review and assessment of EISs would remove duplication and make the environmental review process more efficient. This change would not eliminate EPA's regulatory responsibilities to comment during the development of EISs on matters within EPA's jurisdiction or EPA's responsibilities to collect and publish EISs. It also would not prevent EPA from providing technical assistance to the lead or other cooperating agencies upon request.

5. *Focus the Scope of Federal Resource Agency NEPA Analysis on Areas of Special Expertise or Jurisdiction*

- Currently, disagreements often occur regarding the proper scope of NEPA review, particularly a resource agency's review for a large or complex project. Federal agencies sometimes provide comments or raise objections to issues beyond the scope of their areas of special expertise or jurisdiction.
- These objections and comments create confusion for the public and result in untimely decisions and additional workload.
- Focusing Federal resource agencies' authority to comment on portions of the NEPA analysis that are relevant to their areas of special expertise or jurisdiction would maximize the effectiveness of agency reviews and streamline project delivery.

6. *Reduce Duplication and Increase Flexibility in Establishing and Using Categorical Exclusions*

- Currently, each Federal agency establishes its own categorical exclusions (CEs) by developing a record to substantiate that an activity would not result in significant environmental impacts. All categorical exclusions that a Federal agency proposes to establish or change are reviewed and approved by CEQ.
- Even when a CE has been substantiated by a Federal agency and approved by CEQ, it may not be used by another Federal agency without a separate substantiation and approval process to incorporate the CE into the other

Federal agency's NEPA procedures. A Federal agency also may not change its internal documentation requirements related to CEs, such as moving a "documented" CE to the "undocumented" list, even if experience shows that documentation is no longer needed.
- Authorizing any Federal agency to use a CE that has been established by another Federal agency and identifying documented CEs that can be moved to an agency's undocumented CE list without undergoing the CE substantiation and approval process would reduce duplication and unnecessary environmental analysis for actions that do not create a significant environmental impact. Each agency would track and catalogue its use of another agency's CEs under this provision.

7. *More Effectively Address Environmental Impacts by Allowing Design-Build Contractors for Highway Projects to Conduct Final Design Activities before NEPA Is Complete*

- Under current law, a design-build contractor for a Federal-aid highway project is not authorized to commence final design activities until after the conclusion of the NEPA process (23 U.S.C. 112(b)(3)).
- This restriction diminishes the flexibility afforded with the design-build procurement method, because States are not permitted to allow designers to proceed with final design activities with their own funds under the traditional design-bid-build method.
- Allowing design-build contractors to conduct final design activities would facilitate better environmental reviews in conjunction with the design of projects and would facilitate more efficient and more effective efforts to address environmental impacts. The lead Federal agency would continue to conduct an independent review of the environmental documents and prohibit the agency from taking any action that would prevent the objective consideration of alternatives.

8. *Curtail Costs by Allowing for Advance Acquisition and Preservation of Rail Rights-of-Way before NEPA Is Complete*

- Currently, real property generally cannot be acquired for rail rights-of-way prior to the completion of the NEPA environmental review process.
- While project sponsors might have an opportunity to purchase better and less expensive rights-of-way in advance, the lack of clear statutory direction impedes preservation of rail rights-of-way in advance of project approval.
- Allowing the advance property acquisition and preservation of rail corridors for rail projects would help control costs and improve project delivery. Right-of-way purchase still would be eligible for Federal funding only if used for a project selected through the NEPA process. The risk of bias in the evaluation of alternatives under these circumstances would be minimal, because project sponsors would be able to recoup the value of property if a different alternative ultimately was selected.

9. *Enhance Integration of Transportation Planning and NEPA by Removing an Unneeded Concurrence Point for Using Transportation Planning Documents and Decisions in NEPA*

- Under current law, lead Federal agencies have been encouraged to adopt or incorporate by reference relevant documents and decisions into their NEPA documents. This includes documents from the transportation planning process. The transportation planning process includes robust study and public engagement to develop transportation plans for metropolitan areas. In the Moving Ahead for Progress in the 21st Century Act (MAP-21), Congress formalized the practice of incorporating transportation planning documents but added a new requirement that cooperating agencies had to concur (23 U.S.C. 168(d)).
- Concurrence for incorporating transportation planning documents and decisions was not previously required and is not required for the adoption of other documentation. The transportation planning documents already undergo review and consideration by agencies and the public during plan development. The additional concurrence point adds an unnecessary step that impedes efficient environmental review and the integration of the planning and environmental review process. It also can result in substantial duplication of work, if a cooperating agency does not concur in the incorporation of documentation from planning.
- Eliminating the requirement for concurrence by a cooperating agency would reduce duplication and delay, and would facilitate the integration of the NEPA process with the transportation planning process.

10. *Remove Duplication in the Review Process for Mitigation Banking by Eliminating the Interagency Review Team*

- The 2008 Mitigation Rule that USACE and EPA jointly promulgated includes specified timelines for various tasks associated with the approval and oversight of mitigation banks. The Mitigation Rule provides an opportunity for public and agency review and comment on mitigation banks during the approval process. In addition to this review, the Mitigation Rule requires a second review by an interagency review team, consisting of reviewing agencies, Tribal nations, and the mitigation banking sponsor.
- Approval timelines often are extended beyond those specified in the Mitigation Rule, due to protracted consultation among the interagency review team. The final approval of a mitigation bank often is delayed because of the time it takes to resolve disagreements among the entities participating in the second review.
- Removing the second review would enhance the efficiency of the mitigation bank approval time frames. The members of the interagency review team would still have an opportunity to review and comment through the public participation process required in the Mitigation Rule.

11. *Authorize All Lead Federal Agencies for Infrastructure Projects to Opt into Highway and Transit Streamlining Procedures*

- Highway and transit projects currently have specific statutory authority that promotes efficiencies in the environmental review process for their projects (23 U.S.C. 139). This authority promotes efficiency without changing any substantive environmental laws.
- However, these benefits are limited because they do not apply to other types of infrastructure projects.
- Amending the current law to allow other lead Federal agencies to opt into these provisions could make environmental reviews on other infrastructure projects more efficient. This option would not apply to projects that are eligible under FAST 41 because they already have separate streamlining provisions.

12. *Increase Efficiency by Expediting Certain Small Telecommunications Equipment in NEPA and the National Historic Preservation Act*

- Current law requires that wireless deployers comply with both NEPA and the National Historic Preservation Act (NHPA) for small cells and Wi-Fi attachments in the same way that they obtain permits for large towers.
- Small cells and Wi-Fi attachments do not have an environmental footprint, nor do they disturb the environment or historic property. However, despite this lack of impact, small cells and Wi-Fi attachments typically go through the same level of analysis and review under NEPA and the NHPA, which needlessly adds both delays and costs to the process.
- Amending the law to expedite small cells and Wi-Fi attachments in NEPA and the NHPA would eliminate unnecessary reviews without adversely affecting the environment.

13. *Create Incentives for Enhanced Mitigation*

- Current environmental laws focus primarily on adverse environmental impacts of infrastructure projects, without also recognizing their potential environmental benefits.
- Opportunities for enhancing mitigation or environmentally friendly designs often are lost, because they delay project development without providing any benefit to the project sponsor.
- Establishing procedures that expedite environmental or permitting reviews for projects that enhance the environment through mitigation, design, or other means would provide incentives for project sponsors to propose more environmentally beneficial projects. This would streamline the environmental and permitting review process for those projects that demonstrate an improvement to the environment.

14. *Modify the Federal Power Act and Other Laws to Prohibit the Ability of Federal Agencies to Intervene in FERC Proceedings*

- Under current FERC policy and regulations, agencies that participate as cooperating agencies in FERC's preparation of NEPA documents cannot also intervene in the FERC licensing proceeding. The rationale for FERC's policy is that cooperating agency staff will necessarily engage in off-the-record communications with FERC staff concerning the merits of issues in the proceeding. If the agency is subsequently allowed to become an intervenor in the licensing proceeding, the agency would then have access to information that is not available to other parties, in violation of the prohibition on ex parte communications in both FERC's rules and in the Administrative Procedure Act.
- FERC's rules force Federal agencies to choose either to waive their right to intervene in the proceeding or their right to participate, upon request, as a cooperating agency in FERC's preparation of an environmental document. By choosing not to participate as a cooperating agency, FERC loses the benefit of the agency's technical expertise on important environmental issues, thus inhibiting the identification and resolution of key issues early in the NEPA process.
- Modifying the Federal Power Act and other laws to require Federal agencies, upon request, to participate as a cooperating agency to a FERC NEPA review would ensure that agencies fully participate in the preparation of FERC NEPA documents. Agency participation as a cooperating agency, however, would not impede that agency's ability to file comments to the FERC docket for the relevant proceeding nor impede the agency's ability to defend any requested conditions in court.

15. *Authorize Federal Agencies to Accept Funding from Non-Federal Entities to Support Environmental and Permitting Reviews*

- Currently, some legal authority exists for project proponents to contribute funds to Federal agencies to support such reviews and decisions. This includes authority for public entities to support Federal agencies, State agencies, and Indian tribes participating in environmental planning and review processes for transportation projects (49 U.S.C. 307), as well as authority for USACE to accept funds from non-Federal public entities to provide priority review of permit applications (33 U.S.C. 2352). However, there is no universal authority to accept funding from non-Federal entities for infrastructure projects.
- This limits the ability of Federal agencies to obtain additional resources to help with the permitting and review process, thus causing further delays in project development.
- Amending the law to provide broader authority for Federal agencies to accept funds from non-Federal entities to support review of permit applications and other environmental documents would provide additional resources to streamline project delivery and would help defray the costs of the environmental review. This provision would include appropriate controls for potential conflicts of interest and would maintain the Federal agency's responsibility to conduct its review independently.

C. Protecting Clean Water with Greater Efficiency

1. *Eliminate Redundancy, Duplication, and Inconsistency in the Application of Clean Water Provisions*

These provisions would make the following reforms to create greater efficiencies in the application of clean water provisions:

a. Authorize Federal agencies to select and use nationwide permits without additional USACE review. Currently, Federal agencies are required to submit permit applications to USACE for some projects that meet nationwide permit (NWP) requirements, including general and regional conditions. Federal agencies employ staff who are environmental experts and review these projects before submitting the application to determine whether they meet the criteria for the applicable NWP. Eliminating the additional USACE review and allowing Federal agencies to move forward on NWP projects, subject to permit conditions, would streamline the process and allow USACE to focus on projects that do not qualify for NWPs, which have greater environmental impacts. USACE would retain the right to reinitiate its review for any agency that it finds has incorrectly determined that NWP criteria were met.

b. Consolidate authority to make jurisdictional determinations for 404 permits. Under current interpretation of the Clean Water Act, the EPA Administrator, not the Secretary of the Army, has final authority to construe the jurisdictional term "navigable waters" under Section 404 of the Clean Water Act. USACE has decades of experience and expertise in jurisdictional matters, providing the public approximately 59,000 written jurisdictional determinations per year. Establishing the Secretary of the Army's authority to make jurisdictional determinations under the Clean Water Act would eliminate duplication of work and streamline permit decisions. EPA and USACE would continue to coordinate on rulemaking to ensure consistency in the definition of "waters of the U.S." under the Clean Water Act and to reconcile differences in determinations under other sections of the Clean Water Act.

c. Eliminate duplicative oversight by removing EPA's authority to veto a 404 permit under Section 404(c). The Secretary of the Army, acting through the Chief of Engineers, has authority to grant permits for the discharge of dredged or fill material under Section 404 of the Clean Water Act. EPA can exercise veto authority prior to, during, and after permit decisions. The threat of the veto creates significant uncertainty and delays permit decisions, because project proponents and USACE address perceived concerns to avoid elevation or veto. Removing EPA's authority to veto a 404 permit would make the permitting process more efficient and predictable.

d. Allow use of one NEPA document for both Section 404 and Section 408 actions. Section 408 authorizes the Secretary of the Army to grant permission for the alteration, occupation, or use of a USACE civil works project if the activity will not be injurious to the public interest and will not impair the usefulness of the project (33 U.S.C. 408). To make this determination, Section 408 requires a very similar environmental review to the review required for a Section 404 permit. For actions where both Sections 404 and 408 apply, two independent environmental reviews are required, creating unnecessary duplication of work and delays in issuing permitting decisions.

e. Eliminate duplication in environmental documentation for authorized USACE projects pursued by non-Federal interests. Under current law, if a non-Federal entity intends to implement an authorized USACE civil works project without an executed project partnership agreement, the non-Federal entity would need a permit from the Department of the Army prior to construction (33 U.S.C. 403 and 33 U.S.C. 1344). To authorize the same civil works project, the USACE also would prepare an environmental review and compliance document. Allowing the non-Federal interest to use the completed USACE environmental compliance documentation and decision (e.g., ROD or FONSI) as the environmental review for the Federal permit decision would reduce duplication without removing environmental protections.

2. *Clarify Time Frames and Reduce Delays for Section 401 Certification Decisions*

- Current law requires receipt of a State Water Quality Certification (Section 401 Certification) prior to USACE issuing a Department of the Army (DA) permit (Section 404 and Section 10) decision. Under current law, a State is given a period not to exceed one year to issue its Water Quality Certification, or the requirement is waived.
- In spite of the statutory time frame, States increasingly do not issue permits within the applicable time frames, or they require applicants to re-file prior to the one-year lapse, which produces a loop of repeated lack of issuance and re-filing.
- Amending the Clean Water Act to change the time period for issuance of a State 401 Certification by addressing the time periods for making a completeness determination and the time for a State decision would reduce this delay.

3. *Stabilize Utility Investments by Lengthening the Term of a National Pollutant Discharge Elimination System Permit and Providing for Automatic Renewals*

- Currently, the Clean Water Act places a five-year limitation on the term of permits granted.
- This limitation serves as a disincentive to public and private investments in investor-owned and publicly owned utilities when major investments typically are financed over 20 to 30 years. Moreover, administrative resources in granting permit renewals can significantly impact the timeliness of permit renewal requests.

- Lengthening the permit time limit from five years to fifteen years and providing for automatic renewals of such permits, if the water quality needs do not require more stringent permit limits, would bring more stability to such investments.

D. Reducing Inefficiencies in the Magnuson Stevens Act

1. *Require Timelines to be Met under the Magnuson Stevens Act or Allow Agency to Proceed with Action*

- The Magnuson Stevens Act allows for both an abbreviated consultation process (National Marine Fisheries Service (NMFS) must respond within 30 days) and an expanded consultation process (NMFS must respond within 60 days) when evaluating effects to Essential Fish Habitat.
- Even with these relatively short time frames, consultations tend to take much longer to complete, and thus impact the delivery of infrastructure projects.
- Requiring NMFS to respond to all consultations within 30 days in all cases (unless a 30-day request for extension is received from NMFS and approved by the action agency) would improve time frames and eliminate delays. If no response were received from NMFS within the required time frame, the action agency could then move to final agency action.

E. Reducing Inefficiencies in Protecting Clean Air

1. *Eliminate Confusion by Clarifying that Metropolitan Planning Organizations Need only Conform to the Most Recent National Ambient Air Quality Standard*

- Currently, the Clean Air Act requires EPA to establish National Ambient Air Quality Standards (NAAQS) for certain pollutants. It also requires EPA to periodically review and, if necessary, update these standards.
- This creates a problem every time EPA promulgates newly updated NAAQS before prior standards are revoked. State DOTs and metropolitan planning organizations (MPOs) may be required to demonstrate conformity to both the old and new standards for the same pollutant, creating redundancy and uncertainty, and causing State DOTs and MPOs to spend their limited resources unnecessarily.
- Amending the Clean Air Act to clarify that conformity requirements apply only to the latest NAAQS for the same pollutant would avoid this confusion and reduce legal challenges.

2. *Reduce Uncertainty by Establishing Motor Vehicle Emissions Budgets before Requiring Initial Transportation Conformity Determinations for Newly Designated Areas*

- Currently, the Clean Air Act requires a newly designated area to comply with conformity requirements one year after the effective date of the final nonattainment designation (42 U.S.C. 7506(c)). Conformity typically is demonstrated by showing that an area's transportation plans will not exceed the motor vehicle emissions budget established for that area.

- This creates a problem for newly designated areas because the emissions budget usually takes longer than a year to establish and for EPA to approve. Therefore, in order to demonstrate conformity, MPOs in newly designated areas have to use other less suitable tests, such as "an interim emissions test" or a test based on emissions budgets developed for a previous standard for the same pollutant. These requirements have created confusion and uncertainty.
- Allowing transportation conformity to apply one year after EPA approves or finds the emissions budgets adequate for conformity purposes would eliminate confusion and give MPOs certainty in meeting Federal requirements.

F. Reducing Inefficiencies in Preserving Publicly Owned Land and Historic Properties

1. *Remove Overlapping DOI, USDA, and HUD Reviews from Individual Section 4(f) Evaluations*

- Under current law, DOT is prohibited from using parklands or historic sites unless it determines that there is no other prudent and feasible alternative. Current law requires consultation with DOI, USDA, and the Department of Housing and Urban Development (HUD) in making these determinations. The FHWA/FTA implementing regulations for Section 4(f) of the DOT Act (23 CFR 774.5) require Section 4(f) determinations to be sent to DOI, USDA, and HUD for review and provide a minimum of 45 days for the agencies to comment. Current law also provides for an additional 15-day period after the comment deadline for DOI, USDA, and HUD to transmit comments before FHWA may assume no objection (49 U.S.C. 303 and 23 U.S.C. 138).
- The DOI, USDA, and HUD reviews can delay project delivery even though the review generally does not produce any changes in the determinations, because the agencies have had little direct involvement in a project.
- Removing DOI, USDA, and HUD responsibilities to review individual Section 4(f) determinations would reduce delays in the project development process while not reducing protections to parklands and historic sites.

2. *Eliminate Duplicative Reviews of Historic Property Impacts for Transportation Projects*

- Under current law, potential impacts of transportation projects on historic sites must undergo a review under both Section 106 of the NHPA and Section 4(f). These two laws are different in approach (Section 4(f) results in a substantive determination and Section 106 is a process resulting in an agreement), but both are designed to protect the same historic resources. The FAST Act added an optional process for historic preservation reviews to address this issue, but it added new steps and concurrence points that do not exist in the current regulatory process.

- Conducting two reviews to protect historic properties is redundant and creates substantial additional work. It is also inconsistent with requirements for other infrastructure projects, which only need to comply with Section 106. Because of the additional concurrence points, the optional process included in the FAST Act is a more cumbersome process and has not been used.
- Specifying that an action taken pursuant to a Section 106 agreement does not constitute a "use" under Section 4(f), and therefore would not require a different analysis, would reduce duplication and delay, without reducing protections for the historic properties.

3. *Eliminate Redundancy in Conversion Requirements When Land Purchased with Land and Water Conservation Fund Money Is Impacted*

- Currently, parks and other sites that have been the subject of Land and Water grants of any type cannot be converted to other than public outdoor recreation uses without approval of the NPS. This includes approval of equivalent property to substitute for the converted area. This requirement applies to infrastructure projects that might use parks or other recreational facilities that were funded by Land and Water grants.
- Consulting with the NPS and obtaining its approval for equivalent substitution property can be a lengthy process leading to delayed project delivery. The work of the NPS often duplicates the work of the lead Federal agency in identifying equivalent substitute property.
- Eliminating the requirement for the NPS approval in identifying and procuring replacement property would eliminate duplicative work and speed project delivery (including where authority has been delegated to States).

4. *Reduce Uncertainty by Establishing Reclamation Title Transfer Authorization*

- Currently, there is no blanket authorization for Bureau of Reclamation to transfer title to certain federally owned facilities currently operated by non-Federal partners, who are the primary beneficiaries. Congress provides title transfer authority with respect to individual facilities.
- Obtaining authority from Congress to transfer title for each facility individually is arduous and very time consuming, often taking several years. Delays in obtaining title negatively impact the ability of non-Federal partners to obtain private financing to perform required major rehabilitation and replacement needs. As a result, entities may need to request funding from the Federal Government to perform required work.
- Establishing new transfer authority in the Bureau of Reclamation would streamline the process and reduce delays for executing title transfers. This also would facilitate non-Federal partners' ability to seek private financing for major rehabilitation and replacement needs. Additionally, this would give non-Federal partners greater flexibility in setting operating criteria.

5. *Reduce Uncertainty by Authorizing the Secretary of the Interior to Review and Approve Permits for Pipelines Crossing Lands Administered by the National Parks Service*

- Current law delegates to the Secretary of the Interior authority to review and approve rights-of-way across lands administered by the NPS, but only for electric, water and communications facilities. For pipelines (natural gas and oil) and facilities necessary for the production of energy, specific congressional authorization is needed for each proposed project crossing one of these lands.
- Obtaining congressional approval for each pipeline crossing and facilities necessary for the production of energy is time consuming and delays construction of needed natural gas pipeline facilities. It also is inconsistent with the process adopted for other types of facilities.
- Authorizing the Secretary of the Interior to approve rights-of-way for pipelines and facilities necessary for the production of energy across NPS-administered land in a manner identical to that for other facilities would reduce the delays and uncertainties caused by requiring congressional approval.

II. DELEGATION TO STATES

These provisions will streamline and expand existing procedures to entrust environmental review and permitting decisions to States. These provisions also would help avoid duplication by facilitating reliance on State and local reviews and documentation.

A. Expand Department of Transportation NEPA Assignment Program to Other Agencies

- Using current authority, DOT has successfully assigned its NEPA responsibilities to six States under certain conditions and contingent upon the States signing a memorandum of understanding with the DOT.
- However, this authorization to assign responsibility is limited to FHWA and FTA.
- Authorizing other agencies to assign NEPA responsibilities to States would extend the benefit of this program to other types of infrastructure agencies and projects, under requirements similar to those in the DOT NEPA assignment program.

B. Allow States to Assume FHWA Responsibilities for Approval of Right-of-Way Acquisitions

- Currently, there is no specific authorization for States to assume FHWA's responsibilities for approving right-of-way acquisition transactions. In addition, FHWA regulations require States to obtain authorization before proceeding with any real property acquisition using Federal-aid highway funds.

- Waiting for FHWA can delay the project delivery process for Federal review of what has become a routine activity for States.
- Providing States with authority to assume some, or all, of FHWA's responsibilities for approval of right-of-way acquisitions (subject to the same legal protections that currently apply to the right-of-way acquisition process) would eliminate these delays. DOT would retain the right to terminate a delegation if a State improperly carries out its responsibilities for approving right-of-way acquisitions.

C. Broaden NEPA Assignment Program to Include Other Determinations

- Currently, the Surface Transportation Project Delivery Program ("NEPA assignment program") allows States to fully assume Federal responsibilities under NEPA for highway and transit projects. However, it prohibits DOT from assigning, and States from assuming responsibility for, any project-level conformity determination required under the Clean Air Act for the same projects (42 U.S.C. 7506). It also does not authorize States to assume responsibilities for determinations regarding flood plain protection and noise policies, which would affect determinations made by States during the environmental review process (23 U.S.C. 109 and 327).
- This inconsistent treatment diminishes the effect of the NEPA assignment program. It causes the environmental review process assumed by a State to be interrupted or impacted by Federal approvals or determinations during an environmental review that otherwise has been fully assumed by the State.
- Allowing DOT to assign, and States to assume, project-level transportation conformity determinations and determinations regarding flood plain protections and noise policies as part of the NEPA assignment program would create a more efficient NEPA assignment program. It also would provide an incentive for additional States to participate in the NEPA assignment program. Consistent with the requirements of the NEPA assignment program, States would need to demonstrate the technical capacity to make these determinations. This provision would not change EPA's responsibilities under the Clean Air Act.

III. PILOT PROGRAMS

These provisions would create pilot programs to experiment with new ways to address environmental impacts while delivering projects in a more timely and predictable way.

A. Performance-Based Pilot

- This pilot program would experiment with using environmental performance measures instead of an environmental review process to address environmental impacts of an infrastructure project. Up to 10 projects would be selected to participate in the pilot based on project size, national or regional significance, and opportunities for environmental enhancements.

- The project sponsor for a selected project would agree to design its project to meet performance standards and permitting parameters established by the lead Federal agency. The lead Federal agency would develop these standards with public input and in coordination with other cooperating Federal agencies. The project sponsor's agreement to meet the performance standards and permitting parameters would be in lieu of complying with NEPA and relevant permits or other authorizations.
- The performance standards would result in design elements and enhanced mitigation that address the impacts of the project and meet permit requirements. The pilot would support the goals and objectives of NEPA and meet permit obligations without being constrained by its procedural requirements. It would focus on good environmental outcomes rather than a lengthy environmental review process.

B. Negotiated Mitigation Pilot

- This pilot program would experiment with negotiation of mitigation to address environmental impacts of transportation projects.
- This pilot would authorize the Secretary of Transportation (or other infrastructure agencies) to establish an alternative decision-making process in lieu of NEPA, based on negotiated mitigation agreements and supporting mitigation markets that address anticipated project impacts for a specific set of projects.
- Negotiated mitigation strategies could include purchase of offsets, avoidance of anticipated impacts, and in-lieu-fee dedicated to an advanced mitigation fund.
- This pilot also would establish conditions and limitations for the DOT authority under this pilot.

IV. JUDICIAL REFORM

These provisions would reform judicial review standards for environmental reviews to avoid protracted litigation and to make court decisions more consistent. These provisions also would narrow the scope of judicial review by exempting certain actions or issues from challenge.

A. Limit Injunctive Relief to Exceptional Circumstances

- Currently, a legal challenge to a project under NEPA can delay the start of a project, due to the uncertainty it creates about whether the project will be able to proceed.
- This creates unpredictability regarding time frames for projects, which at the outset can discourage potential investors, and in the end can postpone the public benefits of needed infrastructure projects.

- Limiting injunctive relief to exceptional circumstances would allow for environmental concerns to be addressed without unduly delaying needed infrastructure projects.

B. Revise Statute of Limitations for Federal Infrastructure Permits or Decisions to 150 Days

- Currently, for many infrastructure projects, the statute of limitations allows plaintiffs to file legal challenges to Federal permitting and authorization decisions for up to six years after the decisions have been issued. In addition, under the program in which States can substitute comparable State laws for NEPA ("NEPA substitution program"), the statute of limitations is two years (23 U.S.C. 330).
- Infrastructure projects require significant investment in time and resources. Delays and uncertainty caused by legal challenges to environmental and permitting decisions inhibit investment in projects and impede the delivery of public benefits from improved infrastructure. These delays and uncertainties are exacerbated by long statutes of limitations, creating uncertainty well after decisions have been made.
- Establishing a uniform statute of limitations of 150 days for decisions and permits on infrastructure projects would reduce uncertainty and prevent substantial delays in project delivery, while still affording affected parties an adequate opportunity to initiate legal challenges. A 150-day statute of limitations would be consistent with the statute of limitations Congress already has enacted for surface transportation projects. In addition, revising the statute of limitations for the NEPA substitution program to 150 days would remove a barrier to States using this program.

C. Provide Certainty in Claims on Currentness of Data in Environmental Reviews and Permits

- Environmental reviews and permitting decisions require in-depth studies and data. These reviews can be costly and time consuming. Project sponsors and Federal agencies are expected to use current data in conducting their environmental and permitting reviews.
- With projects spanning several years, a project sponsor may need to conduct multiple studies to generate data on the same issue. While using complete and up-to-date data is necessary to make an informed decision, litigation risk should not be the primary driver in deciding whether to conduct a new study.
- Directing Federal agencies to establish guidelines regarding when new studies and data are required would clarify requirements and create more certainty in the NEPA process. Courts would be precluded from reviewing any claims based on the currentness of data, so long as agencies were in compliance with their established guidelines. In a case where agencies' guidelines for the same data conflict, the guidance for the lead agency would prevail.

PART 4—WORKFORCE DEVELOPMENT

These provisions are dedicated to the American workforce and to policies that will help Americans secure stable, well-paying jobs. The American workforce is an important national asset, and thus should be included in legislation aiming to strengthen and invest in our country's infrastructure.

Currently, there are almost seven million individuals looking for work and roughly six million unfilled jobs. Past Federal policies have left too many Americans behind. This Administration is committed to helping more individuals access affordable, relevant, quality education and skills-development that leads to full-time work and long-term careers. These provisions also will have the important benefit of helping more companies find skilled workers to fill open jobs.

An infrastructure bill will generate new projects that directly increase employment in the construction industry, as well as boost the demand for labor more broadly as additional infrastructure investment spurs economic growth. The provisions outlined below will ensure our country has enough skilled workers to perform not only existing work but also fill the new jobs created by the bill.

I. ACCESS TO EDUCATION AND WORKFORCE DEVELOPMENT PROGRAMS

A. Expand Pell Grant Eligibility to High-Quality, Short-Term Programs

- The Federal Government spends tens of billions of dollars each year in grants for postsecondary education. However, the vast majority of these funds are available only to help pay for courses that meet certain time and/or length requirements. This model is becoming outdated given the expansion of short-term education and workforce development programs that teach relevant skills and help individuals secure well-paying jobs. For example, Pell Grants are generally available only to students who do not yet have a bachelor's degree and who are enrolled in institutions of higher education offering degree programs of at least 600 clock hours or 15 weeks in length.
- Pell Grants are not available for individuals pursuing shorter-term certifications, including persons who are in skilled trades and who are achieving certifications as part of an apprenticeship program. The Workforce Innovation and Opportunity Act (WIOA) can fund some of these types of education, but its funding is broadly distributed across a variety of workforce development efforts.
- Expanding Pell Grant eligibility to high-quality, short-term programs would allow individuals to use Pell Grants to pay for short-term programs that lead to a credential or certification in an in-demand field. There is no "one size fits all" approach to postsecondary education. Rather, there are multiple pathways to success for students, and Federal law should enable students to explore and access these pathways. It is of utmost importance that, as Pell recipients are given greater flexibility in spending grant dollars, measures are undertaken to

ensure students receive quality education. Additionally, efforts should be taken to ensure high-quality, short-term courses and programs are available in fields where there are shortages of qualified workers.

B. Reform Career and Technical Education

- Equipping Americans with the education needed to do the jobs available in our modern economy does not just require changes to our postsecondary education and workforce development policies; it requires changes to our secondary education policies as well. One Federal program related to skills-development and career readiness – the Carl D. Perkins Career and Technical Education (CTE) program – is in dire need of reform. CTE funds are spread thinly and support a broad, fragmented range of activities, many of which are unlikely to improve student outcomes and are often not aligned to local workforce needs.
- Too often, CTE programs do not successfully prepare students for jobs in high-demand fields or local industries. In the 2015-2016 school year, the most common CTE field for secondary CTE concentrators – those who specialize in a single CTE field – was arts and design, followed by business and health.
- Enacting a modified version of the Perkins CTE reauthorization bill passed by the House in June 2017 (H.R. 2353) would ensure that more students in America's secondary and postsecondary institutions have access to high-quality technical education that teaches them practical knowledge and skills needed in today's technology-driven economy. There are several important opportunities to amend H.R. 2353 to improve the legislation and advance the Administration's goals. Needed amendments include:
    - Directing the majority of funding to high schools to promote strategies such as apprenticeship, work-based learning, and dual-enrollment.
    - Authorizing activities to promote and expand apprenticeships.
    - Increasing high-quality CTE programs in high schools by promoting STEM CTE offerings and other offerings related to in-demand industry sectors (determined using the WIOA definition as a starting point and expanded based on input from the private sector) and requiring that they are evidenced-based (as defined by the Every Student Succeeds Act).
    - Allowing States to pool funds to support regional centers and consortia that support multiple districts in partnership with local businesses and other community stakeholders.
    - Strengthening the bill's emphasis on the use of evidence-based research.
    - Authorizing funding for fast-track programs that prepare high school graduates for jobs rebuilding America's infrastructure.

C. Strengthen Ties to the Workforce for College Students

- The Federal Work Study program (FWS) currently is not well-suited or targeted to support students pursuing career and technical education, especially for low-income and low-skilled students seeking to enter or return to the workforce quickly.

- FWS funds are disproportionately distributed to four-year non-profit and flagship public institutions, leaving out quality two-year programs, many of which have a uniquely strong focus on workplace readiness.
- Enacting FWS reforms to better distribute the aid to schools and students who can most benefit would ensure that more participants obtain relevant workplace experience, including by participating in an apprenticeship. This could include:
    - Revamping the funding formula to send funds to schools with a strong record in enrolling Pell students and putting them on a pathway to success.
    - Limiting eligibility to undergraduates.
    - Using program dollars to fund career-related internships or expanding apprenticeship and career pathway programs.

II. EMPOWERING WORKERS

A. Reform Licensing Requirements for Individuals Seeking a Job on an Infrastructure Project

- In many cases, States accepting Federal funding to support infrastructure projects do not allow workers with out-of-State skilled trade licenses to work on those projects.
- Preventing out-of-State professionals from working on infrastructure projects can: (1) reduce the speed of these projects, delaying the effect of the economic benefit they provide; and (2) increase the cost of the projects by artificially limiting the supply of professionals available to work on those projects. These provisions also put Americans who live in rural States or other areas at a disadvantage since they frequently need to relocate (often temporarily) in order to secure work.
- Requiring that States accepting Federal funds for infrastructure projects accept workers with out-of-State licenses to work on those projects would speed project delivery, reduce project costs, and provide flexibility to workers with out-of-State skilled trade licenses.

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SULLIVAN & CROMWELL LLP

November 2, 2017

U.S. Tax Reform

House Ways and Means Committee Releases Draft of Tax Reform Bill

SUMMARY

Earlier today, Republicans in the House of Representatives unveiled the long-anticipated first draft of their tax reform bill.

For the most part, the draft bill is consistent with the broad policy goals provided in the framework released by the "Big Six" on September 27, 2017. However, the language released earlier today provides some detail in a few areas that had previously been left open and diverges from the proposals in the framework in several key respects. Most of the proposed changes would become effective for years after 2017.

Some important features of the draft legislation are as follows:

Business Taxation:

- **Corporate Tax Rate.** The maximum corporate tax rate would be reduced from its current rate of 35% to a lower 20% rate. Personal services corporations would be subject to a 25% corporate tax rate. There appears to be no sunset provision for this tax cut, as was previously rumored.
- **New 25% Tax Rate on Passthrough "Business Income."** Owners of passthroughs (e.g., partnerships and S corporations) who do not materially participate in the business would be taxed at a 25% rate. Under a series of default rules, those actively involved in the business would only qualify for the 25% rate for 30% of their share of the passthrough's income. The remaining 70% would be taxed at the owner's ordinary individual income tax rate, creating an effective marginal rate of 35.22% for the highest earners. Certain owners of capital-intensive businesses would be able to apply a larger percentage to determine the portion of income subject to the reduced 25% rate, using a ratio calculated based on a return of capital (deemed to be the Federal short-term rate, plus 7%). The default rule for active owners of professional services firms (e.g., accounting, law, health, financial services, and investing or trading in securities) would tax 100% of income at the owner's individual income tax rate. However, passive owners of professional services firms would be entitled to the reduced 25% rate.

- **Immediate Expensing of Capital Expenditures.** There would be immediate deduction for the cost of capital expenditures for property (other than real estate) acquired or placed in service after September 27, 2017 and before January 1, 2023, subject to phase-out.
- **Interest Deductibility Limited.** For tax years after 2017, the deductibility of net business interest would be effectively capped at 30% of adjusted taxable income, an amount similar to EBITDA. The net interest expense disallowance would be determined at the entity level (e.g., at the partnership level instead of the partner level). Any disallowed amounts would be carried forward for five years. Real estate firms and small businesses (with $25 million or less of gross receipts) would be exempt from this limitation. There appears to be no grandfathering for preexisting debt.
- **Net Operating Losses.** Net operating losses would be deductible only to the extent of 90% of the taxpayer's taxable income (similar to the current AMT rules), and could be carried forward indefinitely but generally could not be carried back. Amounts carried forward would be increased by an interest factor to preserve the value of those amounts.
- **Non-Qualified Deferred Compensation.** The proposed bill would repeal Section 409A and cause any compensation deferred under a nonqualified deferred compensation plan to be included in income by the employee when the deferred compensation vests (rather than when the compensation is paid).
- **Limits on Compensation Deductibility.** Executive compensation paid to "covered employees" of a publicly traded corporation would no longer be deductible for amounts above $1,000,000, even for performance-based pay. Covered employees, for this purpose, would mean the CEO, the CFO and the three other highest paid officers (for any tax year after 2016 as long as that person continues to receive remuneration).
- **Many Business Tax Incentives Eliminated.** Most business tax incentives (e.g., the domestic production deduction) would be eliminated in the proposed legislation. Three notable exceptions to this rule are the R&D credit, the credit for the production of electricity from renewable resources (e.g., solar), and the low-income housing credit. There would also be additional limitations on the deductibility of entertainment expense.
- **Elimination of Corporate AMT.** The Alternative Minimum Tax ("AMT") would be eliminated for corporations.
- **Real Estate Investment Trust Dividends.** The maximum rate on certain dividends from real estate investment trusts would be 25%.
- **Like-Kind Exchanges Limited to Real Property.** Deferral of gain on like-kind exchanges would only be permitted with respect to real property.
- **Limitation on Deduction for FDIC Premiums.** A percentage of amounts paid by insured depository institutions pursuant to an assessment by the FDIC to support the Deposit Insurance Fund would not be deductible for institutions with total consolidated assets in excess of $10 billion. The percentage gradually declines to zero in proportion to the institution's consolidated assets.
- **No Provision for Corporate Integration.** There is no provision in this bill which would eliminate the double taxation of corporate profits, referred to as "corporate integration."

International Taxation:

- **Shift From "Worldwide" Taxation to "Territorial" Taxation.** U.S. businesses that operate through foreign subsidiaries would only be taxed on their U.S.-source income, rather than on all of their worldwide income. This would be effected by means of a 100% participation exemption for the foreign-source portion of dividends paid by a 10% or more owned foreign corporation to a U.S. corporate shareholder. However, in tandem with the 10% tax on high profit foreign subsidiaries (see next bullet), the system would more resemble a hybrid between a worldwide and a territorial system. In addition, unlike most participation exemption regimes, there appears to be no exemption for gain on the sale of a foreign subsidiary. The rules that require income inclusions of certain U.S. shareholders of controlled foreign corporations that invest in certain U.S. property (e.g., loaning cash to or purchasing shares of the U.S. parent) would effectively be repealed for corporate shareholders of foreign subsidiaries. However, the Subpart F regime (which requires immediate taxation of certain passive or portfolio income of foreign subsidiaries) would be largely preserved. This shift to a territorial system would not change the treatment of U.S. corporations that operate abroad through branches.

- **New 10% Tax on High Profit Foreign Subsidiaries.** A U.S. parent of a "controlled foreign corporation" could be subject to a 10% tax on certain "high returns" of such subsidiaries (50% of the high returns would be taxed at the 20% U.S. corporate rate). High returns would be measured as the excess of the subsidiary's income over a routine return (7% plus the Federal short-term rate) on the subsidiary's adjusted basis in its tangible property, adjusted downward for interest expense. This appears to be the 10% minimum tax about which there was much speculation in the press.
- **20% Excise Tax on Payments to Foreign Affiliates.** Domestic corporations would be subject to a 20% tax on payments to a foreign affiliate that are deductible, includible in cost of goods sold, or includible in the basis of a depreciable or amortizable asset (but not interest or certain commodities transactions), unless the foreign corporation elected to treat the payments as effectively connected income or if there is no markup on a payment for services.
- **Mandatory Deemed Repatriation of Offshore Earnings and Profits.** The foreign earnings of subsidiaries of U.S. corporations that have not been repatriated to the United States, and which have therefore not yet been subject to U.S. taxation, would be deemed distributed to its U.S. parent corporation. All earnings held in cash and cash equivalents would be taxed at a 12% rate and all other earnings would be taxed at a 5% rate. At the election of the taxpayer, this tax could be paid over a period of eight years, payable in equal 12.5% installments. The amount of earnings would be determined as of November 2, 2017 or December 31, 2017 (whichever is higher). Foreign tax credit carryforwards would be fully available, and foreign tax credits triggered by the deemed repatriation would be partially available, to offset the U.S. tax resulting from the deemed repatriation.
- **Interest Deductibility Limited for U.S. Member of Multinationals.** The deductible net interest expense of a U.S. corporation that is a member of an international financial reporting group would be limited to the extent the U.S. corporation's share of the group's global net interest expense exceeds 110% of the U.S. corporation's share of the group's global EBITDA.
- **Anti-Conduit Rule.** If a payment of income otherwise subject to 30% withholding (such as interest, rent, or other "fixed and determinable" payments) is deductible in the United States and made by an entity that is controlled by a foreign parent to another entity controlled by that same foreign parent, such payment would not qualify for treaty benefits unless it would have qualified if paid directly to the foreign parent.
- **Source of Income From Sales of Inventory.** Income from the sale of inventory produced within the United States and sold outside the United States (and vice versa) would be sourced solely based on the production activities with respect to the inventory.

Individual Taxation:

- **Simplified Individual Tax Rates.** The seven current marginal tax rates for individuals would be simplified into four primary rates of 12%, 25%, 35%, and 39.6%. The current top rate of 39.6% would be preserved for income in excess of $500,000 for individual taxpayers and $1,000,000 for married couples. A special "catch-up" provision would phase out the benefit of the 12% rate on the lowest tranche of income for the highest earners.
- **Doubled Standard Deduction and Eliminated Personal Exemptions.** The current standard deduction would be doubled, such that the first $12,000 of income for an individual would be tax-free ($24,000 for married couples). Personal exemptions, on the other hand, would be eliminated.

- **Changes to Itemized Deductions.** The limitation on the total amount of itemized deductions for high-income taxpayers would be repealed (although it would be less significant with the proposed limitations on the state and local tax and mortgage interest deductions). Most itemized deductions would be eliminated (e.g., moving expenses, medical expenses, personal casualty losses). However, the following would be retained, in some form:
    - **State and Local Property Tax Deduction.** Would allow individuals to deduct state and local property taxes up to $10,000. Would not allow individuals to deduct state and local income or sales taxes.
    - **Charitable deduction.** Would preserve the charitable deduction, with several minor changes.
    - **Mortgage interest deduction.** Would preserve the mortgage interest deduction for existing mortgages, and maintain the deductions for newly purchased homes up to $500,000 (but only for the taxpayer's principal residence).
- **Further Limits on Exclusion of Gain From Sale of Principal Residence.** The exclusion would be allowable only if the taxpayer lived in the residence for five of the previous eight years, and would be phased out by one dollar for every dollar by which the taxpayer's adjusted gross income exceeds $250,000 ($500,000 for married couples).
- **Application to Self-Employment Tax to Allocations of Partnership and S Corp Income.** The exception to self-employment tax (including the 3.8% portion applied without limitation of income) on allocations of income to a limited partner of a partnership would be repealed. In addition, self-employment tax would be applied to the portion of income of partnerships and S corporations (whether or not distributed) that would not benefit from the reduced 25% rate for business income of passthroughs (as described above).
- **No "Rothification" of Retirement Accounts.** Would preserve tax treatment of traditional defined contribution plans (e.g., 401(k)'s), which allow the employee to invest pre-tax money (only subject to tax on withdrawal).
- **Elimination of Individual AMT.** The Alternative Minimum Tax ("AMT") would be eliminated for individuals.
- **Estate and Generation-Skipping Transfer Taxes.** Would double the exemption, then repeal the estate and generation-skipping transfer taxes after six years. Would retain the step-up in basis at death. Would lower the gift tax to a top rate of 35% and retain a basic exclusion amount of $10 million and an annual exclusion of $14,000.
- **Elimination of Deduction for Alimony.** Alimony payments would no longer be deductible to the payor nor would alimony be taxable to the recipient.
- **Elimination of Employee Exclusions and Deductions.** Exclusions for employee achievement awards, employer-provided education assistance programs, dependent care assistance programs, and qualified moving expense reimbursement would be eliminated. The deduction for expenses attributable to the trade or business of being an employee would also be eliminated.
- **"Carried Interest" Treatment Not Eliminated.** In its current draft, carried interest appears to be untouched.

Changes Applicable to Tax-Exempt Organizations:

- **Excise Tax for Compensation in Excess of $1 Million.** Tax-exempt organizations would be subject to a 20% tax on compensation in excess of $1 million paid to any "covered employee," which, for this purpose, includes the organization's five highest paid employees for the tax year and any person that was a "covered employee" for any tax year after 2016.
- **Application of UBIT to Public Pension Plans.** State and local government pension plans, which are generally exempt from tax, would be subject to the "unrelated business income tax," which

applies to income derived from a trade or business that is not substantially related to the performance of the organization's tax-exempt function.

- **Investment Income Excise Tax on Private Foundations and Private Colleges and Universities.** Private foundations would be subject to a 1.4% excise tax on net investment income, which tax would not be subject to reduction on account of distributions. Certain large private college and university endowments would also be subject to a 1.4% excise tax on net investment income.

The House Ways and Means Committee will begin acting on the bill on November 6, 2017. Many of the details that still remain to be fully drafted should be clarified as that markup progresses. Separately, the Senate Finance Committee is working on draft tax reform language, which is expected to be released by Thanksgiving. However, that timeline could change if House Republicans fail to first act on the bill in their own chamber.

Questions regarding the tax reform bill may be directed to any member of the Tax Group. Contact information is available on the final page of this memorandum.

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CONTACTS

New York		
Ronald E. Creamer Jr.	+1-212-558-4665	creamerr@sullcrom.com
David P. Hariton	+1-212-558-4248	haritond@sullcrom.com
Jeffrey D. Hochberg	+1-212-558-3266	hochbergj@sullcrom.com
Donald L. Korb	+1-212-558-4822	korbd@sullcrom.com
Andrew S. Mason	+1-212-558-3759	masona@sullcrom.com
Andrew P. Solomon	+1-212-558-3783	solomona@sullcrom.com
David C. Spitzer	+1-212-558-4376	spitzerd@sullcrom.com
Davis J. Wang	+1-212-558-3113	wangd@sullcrom.com
S. Eric Wang	+1-212-558-3328	wangs@sullcrom.com
Daniel J. Bleiberg	+1-212-558-3521	bleibergd@sullcrom.com
T. Max O'Neill	+1-212-558-4485	oneillt@sullcrom.com
David M. Simins	+1-212-558-3781	siminsd@sullcrom.com
London		
Ronald E. Creamer Jr.	+44-20-7959-8525	creamerr@sullcrom.com
S. Eric Wang	+44-20-7959-8411	wangs@sullcrom.com
Washington, D.C.		
Donald L. Korb	+1-202-956-7675	korbd@sullcrom.com

November 3, 2017

Tax Reform Bill Proposes Significant Compensation Changes

Tax Reform Proposal Would Eliminate Nonqualified Deferred Compensation, Limit Deductions for Payments to Highly Compensated Officers and Restrict Compensation for Tax-Exempt Organizations

SUMMARY

On November 1, 2017, the House of Representatives Ways and Means Committee released the first draft of its tax reform bill (the "Proposed Bill"). The Proposed Bill would make significant changes to the taxation of deferred compensation and would revise and increase the limitations on payments to highly compensated employees. However, other discussed changes to qualified plans such as "Rothification" or lowered limits on qualified plan contributions were not included. Most notably, the Proposed Bill would:

- Eliminate nonqualified deferred compensation, by requiring income inclusion when compensation (including stock options) is no longer subject to a service-based vesting requirement and repealing prospectively Sections 409A and 457A of the Internal Revenue Code.
- Eliminate the performance-based and commissions exceptions to the Section 162(m) $1 million deduction limit for compensation paid to covered employees and extend the Section 162(m) limit to the CFO and previous years' covered employees without transition relief (meaning this limit would apply to currently outstanding performance-based awards, stock options and stock appreciation rights that pay out after 2017).
- Apply a 20% excise tax to certain highly compensated employees of tax-exempt organizations that generally tracks the Section 162(m) limitation on compensation deductions for publicly traded corporations.

BACKGROUND

Under current law, nonqualified deferred compensation plans that comply with Section 409A may permit employees to delay including compensation in income until payment is actually made (even if there is not a substantial risk of forfeiture before payment). If a plan fails to comply with Section 409A, employees are subject to an immediate income inclusion as well as additional tax and interest on amounts previously deferred. Section 457A applies to deferred compensation received from tax-indifferent parties (*e.g.*, foreign organizations) and generally requires an income inclusion when there is no substantial risk of forfeiture.

Current Section 162(m) generally limits a publicly traded corporation's ability to deduct compensation in excess of $1 million paid to "covered employees." Due to a discrepancy between the existing text of Section 162(m) and SEC proxy disclosure requirements, the IRS has interpreted "covered employee" to mean the CEO and the three highest compensated officers (other than the CFO). Additionally, this deduction limitation does not apply to performance-based pay (including stock options) or commissions. Under current law, tax-exempt organizations do not have a restriction on compensation analogous to the 162(m) deduction limitation.

THE PROPOSED BILL

A. TREATMENT OF DEFERRED COMPENSATION

The Proposed Bill would effectively eliminate deferred compensation by replacing Sections 409A and 457A with a new Section 409B, which would generally require an income inclusion when compensation is no longer subject to a service-based vesting requirement. Amounts includable under Section 409B would generally be treated as wages for reporting and withholding purposes. Additionally, Section 409B would provide the Treasury Department broad authority to issue regulations necessary or appropriate to carry out the purposes of 409B.

1. Inclusion in Income

The new Section 409B would cause compensation under nonqualified deferred compensation plans to be includable in income on vesting (*i.e.,* when there is no longer a service-based substantial risk of forfeiture). However, compensation paid within 2½ months after the end of the year in which there is no longer a substantial risk of forfeiture would not be treated as deferred. A nonqualified deferred compensation plan—defined broadly to include agreements and arrangements—would include any plan that provides for a deferral of compensation other than (1) qualified employer plans, (2) bona fide vacation leave, sick leave, compensatory time, disability pay or death benefit plans, or (3) other plans prescribed by regulations. The definition would also exclude plans consisting of certain nonexempt trusts and transfers of property in exchange for services described in Section 83 (other than stock options). New Section 409B would also expand the definition of deferred compensation to include equity-based compensation in the form of restricted stock units, stock options and stock appreciation rights, which would effectively eliminate the utility of stock options and stock appreciation rights as a form of incentive compensation.

Additionally, Section 409B would provide a narrow definition of substantial risk of forfeiture that applies only where the right to the deferred compensation is conditioned on the future performance of substantial services. Alone, a covenant not to compete or performance-based vesting conditions would not create a substantial risk of forfeiture. As a practical matter, this would likely mean that compensation could not be deferred beyond service-based vesting other than pursuant to tax-qualified employer plans.

2. Effective Date and Transition Rules

Section 409B would generally be effective for services provided beginning in 2018. Existing deferrals (those for compensation relating to services performed prior to 2018) would be included in income in the last taxable year beginning before 2026, or, if later, when such amounts are no longer subject to a substantial risk of forfeiture.

Additionally, the Proposed Bill calls for the Treasury Department to issue guidance that provides a limited time to amend existing nonqualified deferred compensation arrangements so that distribution dates align with the service provider's income inclusion. Amendments under these transition rules would not violate the requirements of Section 409A or be treated as a material modification of the arrangement for purposes of Section 409A.

B. RESTRICTIONS ON DEDUCTIONS FOR "EXCESSIVE EMPLOYEE REMUNERATION"

The Proposed Bill realigns the definition of "covered employee" with SEC compensation disclosure requirements, with the result that the limitation would apply to the CFO (in addition to the CEO and three other highest paid officers covered under current law). Significantly, the $1 million deduction limitation under Section 162(m) would apply not only to covered employees in the relevant tax year, but also to any person that was a covered employee in any tax year after December 31, 2016 for as long as that person (or a beneficiary) continued to receive remuneration. Further, the definition of remuneration is expanded under the Proposed Bill to include amounts paid to beneficiaries of a covered employee.

Additionally, the Proposed Bill removes the exception for commissions and performance-based compensation, including stock options. Accordingly, these forms of compensation paid to covered employees would also be subject to the deduction limitation. Because the proposed amendments eliminating performance-based compensation would be effective for taxable years beginning after December 31, 2017, it appears that any currently outstanding stock options, stock appreciation rights and other performance-based compensation that become payable in future years would be subject to the $1 million deduction limit.

The scope of employers covered by the rule would also be expanded to include not just companies whose securities are required to be registered, but also companies subject to certain filing requirements.

These rules would be effective for taxable years beginning after 2017, though the inclusion of previous covered employees means that in 2018 the limitation would apply to compensation paid to 2018 covered employees and to 2017 covered employees (or their beneficiaries).

C. EXCISE TAX ON CERTAIN TAX-EXEMPT ORGANIZATION COMPENSATION

The Proposed Bill would create a 20% excise tax on compensation in excess of $1,000,000 paid to covered employees at Section 501(a) exempt organizations, farmer's cooperatives, Section 527 political organizations and organizations with income from public utilities or essential governmental functions. For these exempt organizations, the covered employees would be the five highest compensated employees in the organization in a taxable year as well as any person that was a covered employee for any taxable year beginning in 2017. The excise tax would apply to wages (excluding designated Roth contributions) and excess parachute payments (generally a payment contingent on the employee's separation from the employer that has a present value greater than three times the employee's base compensation).

The excise tax would be imposed on the organization rather than the employee and would apply to payments received from related organizations. Where related organizations contribute to a covered employee's remuneration, each organization would be liable for the tax in proportion to the amount that organization contributed to the covered employee's total remuneration.

This rule would take effect for tax years beginning after December 31, 2017.

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SULLIVAN & CROMWELL LLP

ABOUT SULLIVAN & CROMWELL LLP

CONTACTING SULLIVAN & CROMWELL LLP

CONTACTS

New York

Heather L. Coleman	+1-212-558-4600	colemanh@sullcrom.com
Matthew M. Friestedt	+1-212-558-3370	friestedtm@sullcrom.com
Jeffrey D. Hochberg	+1-212-558-3266	hochbergj@sullcrom.com
Andrew S. Mason	+1-212-558-3759	masona@sullcrom.com
Andrew B. Motten	+1-212-558-4479	mottena@sullcrom.com
David C. Spitzer	+1-212-558-4376	spitzerd@sullcrom.com
Marc Trevino	+1-212-558-4239	trevinom@sullcrom.com
Isaac J. Wheeler	+1-212-558-7863	wheeleri@sullcrom.com

Washington, D.C.

Rebecca S. Coccaro	+1-202-956-7690	coccaror@sullcrom.com

SULLIVAN & CROMWELL LLP

November 3, 2017

U.S. Tax Reform: Insurance Company Provisions

House Ways and Means Committee Releases Draft Tax Reform Bill: Insurance Company Provisions

SUMMARY

On November 2, 2017, Republicans in the House of Representatives unveiled the long-anticipated first draft of their tax reform bill, the "Tax Cuts and Jobs Act."

Some important features of the draft legislation which would impact the taxation of insurance companies are as follows:

Life Insurance Company Provisions:

- ***Computation of life insurance reserves.*** Life insurance companies would take into account a specific percentage, 76.5%, of the increase or decrease in reserves for future unaccrued claims in computing taxable income. Certain types of reserves would not be included. The effect of the provision on computing reserves for contracts issued before the effective date would be taken into account ratably over the succeeding eight tax years.
- ***Adjustment for change in computing reserves.*** Under current law, life insurance companies may take into account changes in taxable income as a result of an adjustment in the method of computing reserves over ten years. Under the draft legislation, life insurance companies would take such adjustments into account in the same manner as non-life insurance companies (*i.e.*, in the tax year during which the accounting method change occurs for an adjustment that reduces taxable income, or over the course of four tax years for an adjustment that increases taxable income).
- ***Revisions of the capitalization rule for deferred acquisition costs ("DAC").*** The DAC rules would be revised to replace the existing three categories of insurance contracts with only two categories, and by raising the percentages at which premiums are capitalized. The two categories would consist of (1) group contracts, which would be capitalized at a 4% rate, and (2) all other specified contracts, which would be capitalized at an 11% rate.
- ***Modification of rules for determining the dividends-received deduction.*** A life insurance company's share of dividends, for purposes of computing its dividends-received deduction, would be fixed at 40%, rather than determined pursuant to a proration formula.

- ***Repeal of special estimated tax payments.*** The election to claim a deduction equal to the difference between the amount of reserves computed on a discounted basis and the amount computed on an undiscounted basis and related special estimated tax payment rules would be repealed.
- ***Modifications of net operating loss carryover rules*.** Life insurance companies would be allowed to carry net operating losses back up to two tax years or forward up to twenty tax years (as opposed to a three-year period for carrybacks and a fifteen-year period for carryforwards under current law), in conformity with the general net operating loss carryover rules.
- ***Repeal of special rule for distributions to shareholders from pre-1984 policyholders surplus accounts.*** The rules for policyholders' surplus accounts (keeping track of operating income which would be taxed only when distributed) would be repealed. Any remaining balances (as of the effective date) would be subject to tax, payable in eight annual installments.

Property and Casualty Insurance Company Provisions:

- ***Modification of proration rules for property and casualty insurance companies*.** The reduction in the reserve deductions of property and casualty insurance companies would be increased from 15% to 26.25% of (1) the company's tax-exempt interest, (2) the deductible portion of dividends received, and (3) the increase for the tax year in the cash value of life insurance, endowment, or annuity contracts the company owns.
- ***Modification of discounting rules for property and casualty insurance companies.*** A property and casualty insurance company would be required to discount unpaid losses by corporate bond yields (as specified by Treasury), as opposed to mid-term applicable Federal rates. In addition, the special rule that extends the loss payment pattern period for long-tail lines of business would be applied similarly to all lines of business. The draft legislation also would repeal the election to use company-specific, rather than industry-wide, historical loss payment patterns. A transition rule would spread adjustments relating to pre-effective date losses and expenses over such tax year and the succeeding seven tax years.

International Provisions:

- ***20% Excise Tax on Payments to Foreign Affiliates.*** Domestic corporations would be subject to a 20% tax in making certain deductible payments to a foreign affiliate, unless the affiliated foreign corporation elected to treat the payments as effectively connected income. Reinsurance transactions with foreign affiliates would presumably be subject to these rules.
- ***Restriction on insurance business exception to passive foreign investment company ("PFIC") rules.*** The PFIC exception for insurance companies would be amended to apply only if the foreign corporation would be taxed as an insurance company were it a U.S. corporation and if loss and loss adjustment expenses, unearned premiums, and certain reserves constitute more than 25% of the foreign corporation's total assets (or 10% if the corporation is predominantly engaged in an insurance business and the reason for the percentage falling below 25% is solely due to temporary circumstances).

The provisions above would generally be effective for tax years beginning after 2017.

Other provisions in the draft legislation which affect corporations and multinationals could also impact insurance companies, including, amongst others, provisions which would implement a lower corporate tax rate, a shift to a territorial tax system, the mandatory deemed repatriation of offshore earnings and profits, and new limits on interest deductibility. These provisions are described in a separate memorandum, which may be obtained by following the instructions at the end of this memorandum.

The House Ways and Means Committee will begin acting on the bill on November 6, 2017. Many of the details that still remain to be fully drafted should be clarified as that markup progresses. Separately, the Senate Finance Committee is working on draft tax reform language, which is expected to be released by Thanksgiving. However, that timeline could change if House Republicans fail to first act on the bill in their own chamber.

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CONTACTS

New York		
Ronald E. Creamer Jr.	+1-212-558-4665	creamerr@sullcrom.com
David C. Spitzer	+1-212-558-4376	spitzerd@sullcrom.com
S. Eric Wang	+1-212-558-3328	wangs@sullcrom.com
Eric M. Lopata	+1-212-558-4164	lopatae@sullcrom.com
London		
Ronald E. Creamer Jr.	+44-20-7959-8525	creamerr@sullcrom.com
S. Eric Wang	+44-20-7959-8411	wangs@sullcrom.com

SULLIVAN & CROMWELL LLP

November 10, 2017

U.S. Tax Reform

Joint Committee on Taxation Releases Summary of Senate Finance Committee's Tax Reform Plan

SUMMARY

Late yesterday, the Joint Committee on Taxation published the Senate's proposal on tax reform (in the form of a description of the "Chairman's Mark" of the "Tax Cuts and Jobs Act"). The Senate proposal shares some similarities but also contains notable differences to the House proposal, some of which are highlighted below (the initial House proposal is discussed in more detail in Sullivan & Cromwell LLP's November 3, 2017 memorandum; certain recent amendments to the House proposal will be noted in this publication). The Senate Committee on Finance has scheduled a markup of the Chairman's Mark on November 13, 2017. There is expected to be a series of amendments and debate within the Senate Committee on Finance early next week, with additional detail and legislative text expected as early as late next week. Because the proposal is not accompanied by legislative text, the details of these proposals are often unclear.

Key Differences Between House and Senate Proposals:

- **Corporate Tax Rate.** Both proposals would reduce the corporate tax rate from 35% to 20%, but the change would apply to taxable years starting after 2017 in the House proposal and after 2018 in the Senate proposal.
- **Excise Tax on Payments to Foreign Affiliates.** The Senate proposal excludes the 20% excise tax on certain deductible payments to foreign affiliates that is included in the current House proposal. Instead, the Senate proposal includes alternative measures aimed at preventing base erosion.
- **Deemed Repatriation Rates.** Both proposals would require deemed repatriation of untaxed foreign earnings; however, the House proposal as amended last evening would tax such earnings at rates of 14% (on cash and cash equivalents) and 7% (on all other earnings), whereas the Senate proposal would tax such earnings at rates of 10% and 5%, respectively.
- **Nonqualified Deferred Compensation.** The House proposal as amended last evening retains current law, whereas the Senate proposal would cause compensation deferred under a

nonqualified deferred compensation plan to be included in income by the employee when the deferred compensation vests (rather than when the compensation is paid).

THE SENATE PROPOSAL

Some important features described in the summary of the Senate proposal are as follows:[1]

Business Taxation:

- **Corporate Tax Rate.** The maximum corporate tax rate would be permanently reduced from its current rate of 35% to a lower 20% rate, but (unlike in the House proposal) the change would apply to taxable years starting after 2018.
- **Deduction for Passthrough "Qualified Business Income."** The Senate proposal would allow an individual to deduct 17.4% of that individual's share of any "domestic qualified business income" of a passthrough (e.g., a partnership or S corporation). Subject to the wage limitation described below, the effective marginal rate would be 31.8% in respect of such income for the highest earners. The deduction would not apply to income from certain services businesses (e.g., accounting, law, health, financial services), except in the case of individuals whose taxable income would not exceed $150,000. Also, qualified business income would not include investment-related income, other than certain dividends from REITs. Further, the amount of the deduction generally would be limited to 50% of the domestic wages paid (apparently) by the taxpayer.[2] The deduction differs from the House proposal, which favors capital owners and otherwise applies a default "70-30" split for active owners and which generally does not benefit individuals who otherwise would not face a marginal rate higher than 25%.
- **Reduced Dividends Received Deduction.** Under the Senate proposal, consistent with the House proposal as amended last evening, a corporation would only be able to deduct 65% (down from 80% under current law) of the amount of dividends received from domestic corporations in which the receiving corporation owned more than 20% of the stock, and a corporation would only be able to deduct 50% (down from 70% under current law) of the amount of dividends received from other domestic corporations.
- **Interest Deductibility Limited.** Similar to the House proposal, the deductibility of net business interest would be effectively capped at 30% of adjusted taxable income (which may differ from the House measure that references EBITDA). This limitation would not apply to certain real estate activities or public utilities, exemptions for which are also available under the House proposal.
- **Net Operating Losses.** Similar to the House proposal, net operating losses would be deductible only to the extent of 90% of the taxpayer's taxable income (similar to the current AMT rules), and could be carried forward indefinitely but generally could not be carried back. Unlike the House proposal, however, there is no time value adjustment to the losses that are carried forward.
- **Immediate Expensing of Capital Expenditures.** There would be immediate deduction for the cost of capital expenditures for property (other than real estate) acquired or placed in service after September 27, 2017 and before January 1, 2023, subject to phase-out. This description matches the House proposal.
- **Nonqualified Deferred Compensation.** Similar to the original House proposal (since amended to provide otherwise), the Senate proposal would cause any compensation deferred under a nonqualified deferred compensation plan to be included in income by the employee when the deferred compensation vests (rather than when the compensation is paid).

[1] Unless otherwise noted, the proposed changes would become effective for years after 2017.

[2] The Senate proposal apparently would apply the limitation only to income from partnerships or S corporations.

- **Limits on Compensation Deductibility.** As in the House proposal, executive compensation paid to "covered employees" of a publicly traded corporation would no longer be deductible for amounts above $1 million, even for performance-based pay. Covered employees, for this purpose, would mean the CEO, the CFO and the three other highest paid officers (for any tax year after 2016 as long as that person continues to receive remuneration).
- **Some Business Tax Incentives Eliminated.** The Senate proposal would eliminate some business tax incentives (e.g., the domestic production deduction), but fewer would be eliminated than in the House proposal. Consistent with the House proposal, there would also be additional limitations on the deductibility of entertainment expenses.
- **Elimination of Corporate AMT.** As in the House proposal, the Alternative Minimum Tax ("AMT") would be eliminated for corporations.
- **Taxable Year of Inclusion for Income Recognized on Financial Statements.** The Senate proposal would require a taxpayer to recognize an item of income no later than the taxable year in which such item were taken into account on GAAP or similar financial statements. The scope of this requirement is unclear, and the literal application of the proposal could have far-reaching consequences, which may not be intended (given the relatively modest revenue score).
- **Like-Kind Exchanges Limited to Real Property.** As in the House proposal, deferral of gain on like-kind exchanges would only be permitted with respect to real property.
- **Limitation on Deduction for FDIC Premiums.** As in the House proposal, a percentage of amounts paid by insured depository institutions pursuant to an assessment by the FDIC to support the Deposit Insurance Fund would not be deductible for institutions with total consolidated assets in excess of $10 billion. The percentage gradually declines to zero in proportion to the institution's consolidated assets.
- **No Provision for Corporate Integration.** The Senate proposal does not contain a provision that would eliminate the double taxation of corporate profits, referred to as "corporate integration," which had previously been championed by Senator Orrin Hatch (Chairman of the Senate Committee on Finance).

International Taxation:

- **Shift From "Worldwide" Taxation to "Territorial" Taxation.** Similar to the House proposal, subject to certain minor differences, U.S. corporations that operate through foreign subsidiaries would only be taxed on those subsidiaries' U.S.-source income. This "territorial" system would be effectuated by means of a 100% dividends-received deduction for the foreign-source portion of dividends paid by a 10% or more owned foreign corporation to a U.S. corporate shareholder.
- **New Tax on Foreign Income From Intellectual Property.** The Senate proposal would identify certain global intangible low-taxed income ("GILTI") and require that a U.S. parent corporation include such income currently, even if such income were earned in a foreign subsidiary. Credits for foreign taxes imposed on such income would be reduced by 20%. GILTI would be defined for this purpose as the excess of active foreign source income (e.g., not including subpart F income, or income subject to a high rate of foreign tax) over a 10% return on the adjusted tax basis of active foreign tangible assets. A U.S. corporation would be entitled to deduct 37.5% of the lesser of its taxable income or certain of its foreign-derived income attributable to intangibles (including GILTI), resulting in an effective 12.5% rate for such income (a proposal that is sometimes described as "patent-box lite").
- **Incentive for IP Migration to the United States.** A separate proposal eliminates the potential tax on distributing IP back to the United States, which may in some cases encourage relocation of intangibles back to the United States if there are no foreign tax consequences to such a distribution.
- **No Excise Tax on Payments to Foreign Affiliates.** Under the most recent amended version of the House proposal, domestic corporations would be subject to a 20% tax on various related-

party cross-border transactions unless the related party elected to treat the payment as effectively connected income subject to net basis U.S. taxation. The Senate proposal excludes this provision.

- **New Base Erosion Minimum Tax.** The base erosion minimum tax is essentially a 10% minimum tax calculated on a base equal to the taxpayer's income determined without tax deductions or other tax benefits arising from "base erosion" payments. A "base erosion payment" is generally an amount paid or accrued by a taxpayer to a related foreign person that is deductible to the taxpayer. This provision would only apply to corporations that have average annual gross receipts of at least $500 million (for the three prior tax years) and that have a "base erosion percentage" of at least 4%. The base erosion percentage means, for any taxable year, the percentage determined by dividing the corporation's base erosion tax benefits by the total deductions allowed with respect to the corporation.

- **Mandatory Deemed Repatriation of Offshore Earnings and Profits.** Consistent with the House proposal, the foreign earnings of subsidiaries of a U.S. corporation that have not been repatriated to the United States, and which have therefore not yet been subject to U.S. taxation, would be deemed distributed to the U.S. parent corporation. All earnings held in cash and cash equivalents would be taxed at a 10% rate (14% in the amended House proposal) and all other earnings would be taxed at a 5% rate (7% in the amended House proposal). At the election of the taxpayer, this tax could be paid over a period of eight years. The amount of earnings would be determined as of November 9, 2017 (or other applicable measurement date). Foreign tax credits triggered by the deemed repatriation would be available to partially offset the tax resulting from the deemed repatriation. The benefits of the reduced rates upon repatriation would be recaptured if the U.S. company engages in an inversion transaction within 10 years (i.e., where U.S. shareholders hold an inversion percentage in the 60-80% range).

- **U.S. Tax on Sale of Certain Partnership Interests.** Overturning a recent case decided by the Tax Court in favor of the taxpayer, but consistent with the IRS's position at least since its revenue ruling in 1991, the Senate proposal provides that a non-U.S. partner in a partnership would recognize gain or loss treated as "effectively connected" to a U.S. trade or business upon the sale of the partner's partnership interest, to the extent that the partner would be treated as having effectively connected income in a hypothetical sale of all the assets of the partnership. The transferee in such transaction would be required to withhold 10% of the amount realized, unless the transferor certifies that it is not a nonresident alien or foreign corporation. This proposal would apply to sales and exchanges occurring after December 31, 2017.

- **Interest Deductibility Limited for U.S. Members of Multinationals.** The deductible interest expense of U.S. corporations that are members of a worldwide affiliated group would be limited to the extent that the worldwide affiliated group's total debt is disproportionately held by the group's U.S. members. The U.S. corporation's deduction for interest would be reduced by the product of the corporation's net interest expense and the "debt-to-equity differential percentage" of the worldwide affiliated group. The debt-to-equity differential percentage of the worldwide affiliated group means the amount by which the total indebtedness of the U.S. members of the group exceeds 110% of the total indebtedness those members would hold if their total indebtedness to total equity ratio were proportionate to the ratio of the total indebtedness to total equity of the worldwide group. Intragroup debt and equity interests are disregarded for purposes of this calculation. This provision would serve both as a limit on the ability of a related foreign parent corporation to strip earnings out of a U.S. subsidiary through debt capitalization and as a de facto "world-wide apportionment rule" for the allocation of interest expense incurred by a U.S. multinational between U.S. earnings and exempt foreign-source dividend income.

- **Definition of "U.S. Shareholder" of a Controlled Foreign Corporation.** The Senate proposal broadens the definition of "U.S. shareholder" to include a person who owns 10% or more of a foreign company's stock by value (in addition to those who own 10% or more by vote, which is the test under current law) for the purposes of determining whether a foreign corporation is a "controlled foreign corporation" and for purposes of the various changes described above. This change would take effect for taxable years beginning before January 1, 2018.

- **No Preferential Rates for Dividends From Inverted Companies.** Shareholders would not be eligible for the lower rates that apply to certain "qualified" dividends if those dividends were received from a corporation that had engaged in an inversion transaction (i.e., where U.S. shareholders hold an inversion percentage in the 60-80% range).
- **Source of Income From Sales of Inventory.** As in the House proposal, income from the sale of inventory produced within the United States and sold outside the United States (and vice versa) would be sourced solely based on the production activities with respect to the inventory.
- **Outbound Transfers of Intangible Property.** The Senate proposal confirms IRS authority on recent guidance regarding the treatment of outbound transfers of certain intangibles. The proposal supports the position put forth in Treasury regulations proposed in September 2015, which provide that upon an outbound transfer of foreign goodwill or going concern value, a U.S. transferor would be subject to either current gain recognition or to a special rule that requires inclusion of deemed royalties following such transfer, even if the value of the transferred property was created exclusively through offshore activities. The Senate proposal would also confirm the IRS's authority to specify the method to be used to determine the value of the intangible property transferred.
- **Denial of Deduction for Interest and Royalty Payments Involving Hybrid Entities.** The Senate proposal would deny a deduction with respect to certain payments of interest or royalties between related parties where the recipient is not required to include the payment in income under the tax law of its country of residence, is allowed a deduction with respect to such amount, or is a "hybrid entity" (i.e., is treated as a passthrough entity for U.S. tax purposes but not for foreign tax purposes, or vice versa).

Individual Taxation:

- **Individual Tax Rates.** The seven current marginal tax rates for individuals would be modified, with a top rate of 38.5% for income in excess of $500,000 for individuals and $1 million for married couples, but there would be no "catch-up" provision to phase-out the benefit of the 10% rate on the lowest tranche of income for the highest earners. The House proposal includes only four brackets, maintaining the current top marginal rate of 39.6%.
- **Doubled Standard Deduction and Eliminated Personal Exemptions.** As in the House proposal, the current standard deduction would be doubled, such that the first $12,000 of income for an individual would be tax-free ($24,000 for married couples). Personal exemptions would be eliminated.
- **Changes to Itemized Deductions.** As in the House proposal, the limitation on the total amount of itemized deductions for high-income taxpayers would be repealed (although this would be less significant with the proposed limitations on the state and local tax deductions). All "miscellaneous itemized deductions" that currently may only be claimed if their aggregate amount exceeds 2% of the taxpayer's adjusted gross income would be eliminated (e.g., deductible investment expenses from passthrough entities).
- **State and Local Tax Deduction.** The Senate proposal would not allow individuals to deduct any state and local income, sales, or property taxes, unless such taxes were paid or accrued in carrying on a trade or business. The House proposal also would deny deductions for an individual's state and local income and sales taxes, but would allow individuals to deduct state and local property taxes up to $10,000.
- **Charitable Deduction.** The Senate proposal, like the House proposal, would preserve the charitable deduction with several minor changes.
- **Mortgage Interest Deduction.** The Senate proposal would preserve the mortgage interest deduction in its current form (for mortgages up to $1 million), but would repeal the deduction for interest on home equity indebtedness. The House proposal limits the mortgage interest deduction

to mortgages of up to $500,000, and only permits the deduction with respect to the taxpayer's personal residence.

- **Further Limits on Exclusion of Gain From Sale of Principal Residence.** Consistent with the House proposal, the exclusion of gain from the sale of a principal residence would be allowable only if the taxpayer lived in the residence for five of the previous eight years. The exclusion would not be phased out as the taxpayer's adjusted gross income rises.
- **Estate, Gift and Generation-Skipping Transfer Taxes.** The Senate proposal would double the estate, gift and generation-skipping transfer tax exemption amount (to $11.2 million per person (or $22.4 million for a married couple) in 2018, adjusted annually for inflation), but would not repeal the estate and generation-skipping transfer taxes, as the House proposal would do. No other changes would be made to the estate and gift tax regime.
- **Application of Self-Employment Tax to Allocations of Passthrough Income.** Consistent with an amendment to the House proposal, the Senate proposal retains the current rules on the application of payroll taxes to amounts received through a passthrough entity.
- **No "Rothification" of Retirement Accounts.** As in the House proposal, the Senate proposal would preserve tax treatment of traditional defined contribution plans (e.g., 401(k)'s), which allow the employee to invest pre-tax money (only subject to tax on withdrawal).
- **Elimination of Individual AMT.** As in the House proposal, the AMT would be eliminated for individuals.
- **Deduction for Alimony.** The Senate proposal does not eliminate the deduction for alimony payments, as the House proposal would do.
- **Elimination of Certain Employee Exclusions and Deductions.** Consistent with the House proposal, the exclusion for qualified moving expense reimbursement, as well as the qualified bicycle reimbursement, would be eliminated. The deduction for moving expenses would also be eliminated. Notably, however, the exclusion for adoption assistance programs and dependent care programs seems untouched in the Senate proposal.
- **"Carried Interest" Treatment Not Affected.** The Senate proposal would not affect the treatment of income in respect of carried interest. However, an amendment to the House proposal earlier this week included a limitation on the application of preferential rates to gains on investments allocable to a carried interest in respect of investments held for three years or less.

Changes Applicable to Tax-Exempt Organizations:

- **Excise Tax for Compensation in Excess of $1 Million.** As in the House proposal, tax-exempt organizations would be subject to a 20% tax on compensation in excess of $1 million paid to any "covered employee," which, for this purpose, includes the organization's five highest paid employees for the tax year and any person that was a "covered employee" for any tax year after 2016.
- **No Application of UBIT to Public Pension Plans.** The Senate proposal would not cause state and local government pension plans, which are generally exempt from tax, to be subject to the "unrelated business income tax." The House proposal would do so.
- **Investment Income Excise Tax on Private Colleges and Universities.** As in the House proposal, certain large private college and university endowments would be subject to a 1.4% excise tax on net investment income. However, unlike in the House proposal, the excise tax that applies to private foundations would be unchanged.

Amendments to the bill will be filed by members of the Senate Finance Committee this weekend, and the Committee will begin acting on the bill on November 13, 2017. Many of the details of the above proposals should be clarified as the markup progresses. The Committee will aim to complete the markup by the end of next week and to submit the bill to a vote on the Senate floor during the week after Thanksgiving.

THE HOUSE BILL

The House Committee on Ways and Means marked up its own proposed bill this week and passed an amended version of that proposal by a 24-16 party-line vote. The amendments to the initial House proposal included several significant changes, including an increase in the tax rates applicable to deemed-repatriated foreign earnings, an extension of the holding period required to benefit from "carried interest" treatment, and abandonment of the proposed treatment of nonqualified deferred compensation described above. The House Committee on Rules will convene next week to consider the bill as passed by the Ways and Means Committee. After that, the bill would go to the floor of the House for a final vote.

Questions regarding the tax reform bill may be directed to any member of the Tax Group. Contact information is available on the final page of this memorandum.

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CONTACTS

New York			
	Ronald E. Creamer Jr.	+1-212-558-4665	creamerr@sullcrom.com
	David P. Hariton	+1-212-558-4248	haritond@sullcrom.com
	Jeffrey D. Hochberg	+1-212-558-3266	hochbergj@sullcrom.com
	Donald L. Korb	+1-212-558-4822	korbd@sullcrom.com
	Andrew S. Mason	+1-212-558-3759	masona@sullcrom.com
	Andrew P. Solomon	+1-212-558-3783	solomona@sullcrom.com
	David C. Spitzer	+1-212-558-4376	spitzerd@sullcrom.com
	Davis J. Wang	+1-212-558-3113	wangd@sullcrom.com
	S. Eric Wang	+1-212-558-3328	wangs@sullcrom.com
	Daniel J. Bleiberg	+1-212-558-3521	bleibergd@sullcrom.com
	T. Max O’Neill	+1-212-558-4485	oneillt@sullcrom.com
London			
	Ronald E. Creamer Jr.	+44-20-7959-8525	creamerr@sullcrom.com
	S. Eric Wang	+44-20-7959-8411	wangs@sullcrom.com
Washington, D.C.			
	Donald L. Korb	+1-202-956-7675	korbd@sullcrom.com

SULLIVAN & CROMWELL LLP

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U.S. Tax Reform

Congress Passes Tax Reform

SUMMARY

Today, Congress voted to pass a comprehensive tax reform bill (the "Act"),[1] and the President is expected to sign it into law in the coming weeks. The Act represents the most significant reform of the U.S. tax code in over 30 years.

The Act is generally consistent with the proposals contained in the bill released by the Senate on November 14 (the "Senate bill"), but also incorporates certain provisions of the bill released by the House of Representatives on November 2 (the "House bill"). The Act also removes some provisions that were contained in both earlier draft bills, and includes some new provisions that were contained in neither draft bill. This memorandum describes some of the important provisions of the Act, and highlights certain areas where the Act diverges from the earlier draft legislation. Most of the proposed changes become effective for years after 2017.

Key Features of the Act:

- **Individual Tax Rates.** The seven marginal tax rates for individuals are modified, with a top rate of 37% for income in excess of $500,000 for individuals and $600,000 for married couples. The Act's modified rate structure does not apply to taxable years beginning after December 31, 2025, and rates will revert to the rates in effect during 2017 after that date.
- **Corporate Tax Rate to 21%.** The maximum corporate tax rate is reduced from 35% to 21%, effective for taxable years beginning after December 31, 2017, and with no sunset provision.
- **State and Local Tax Deduction for Property and Income/Sales Taxes.** Individuals may deduct state and local property taxes and either income or sales taxes up to an aggregate of $10,000 (the House and Senate bills only allowed a $10,000 deduction for state and local property taxes).

[1] The formal name for the Act is "An act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018."

The Act also includes a provision disallowing prepayment of state and local income taxes before January 1, 2018 to avoid the $10,000 limitation for taxable years after 2017.

- **Interest Deductibility Limited.** The deductibility of net business interest is effectively capped at 30% of EBITDA for five years, and then at 30% of EBIT thereafter (a compromise between the approaches of the House bill and the Senate bill).
- **Modified Version of Senate Passthrough Taxation Regime.** Subject to several modifications (described below), the Act follows the Senate bill's model for passthrough taxation, by allowing a taxpayer other than a corporation to deduct the lesser of (i) 20% of that taxpayer's share of any "domestic qualified business income" of a passthrough (e.g., a partnership, S corporation, or sole proprietorship), and (ii) the greater of (a) 50% of the domestic wages paid with respect to the trade or business and (b) the sum of 25% of such wages and 2.5% of the unadjusted basis of all qualified property used in such trade or business.
- **Shift From "Worldwide" Taxation to "Territorial" Taxation.** A U.S. corporation that owns 10% or more of a foreign corporation will be entitled to a 100% dividends-received deduction for the foreign-source portion of dividends paid by such foreign corporation.
- **Deemed Repatriation Rates.** Like the House and Senate bills, the Act requires deemed repatriation of previously untaxed foreign earnings; however, the Act taxes all earnings held in cash and cash equivalents at a 15.5% rate (14% in the House bill and 14.5% in the Senate bill) and all other earnings at an 8% rate (7% in the House bill and 7.5% in the Senate bill).
- **Anti-Base Erosion and Income Shifting Provisions.** Similar to the Senate bill, the Act includes several anti-base erosion and income shifting provisions, including a base erosion minimum tax ("BEAT"), which is essentially a 10% corporate minimum tax calculated on a base equal to the taxpayer's income determined without tax deductions or other tax benefits arising from "base erosion" payments, and a tax on certain global intangible low-taxed income ("GILTI") that captures the excess return (deemed to be attributable to intangibles) above a statutory 10% return on certain tangible investments. The Act also provides for a special regime (taxed at 13.125%) for foreign-derived intangible income ("FDII") of U.S. corporations, most commonly understood as a "patent box"-like regime to benefit income on U.S. intangibles that are derived from outside of the United States (all described in further detail below).
- **Estate Tax Remains but Exemption Doubled.** The Act follows the Senate bill by retaining the estate tax, but doubling the estate, gift, and generation-skipping transfer tax exemption amount (to $11.2 million per person (or $22.4 million for a married couple) in 2018, adjusted annually for inflation). The House bill would have eliminated the estate tax.
- **Required Holding Period for "Carried Interest" Treatment Increased.** The Act treats capital gain allocated from a partnership interest received as a "carried interest" as short-term capital gain unless the partnership has a holding period for the sold asset of more than three years.
- **No Changes to Identification of Specified Securities.** The Act does not contain the provision in the Senate bill that would have required lots of specified securities purchased at different prices to be sold on a first-in first-out ("FIFO") basis.
- **Excess Business Losses Disallowed.** The Act disallows "excess business losses" (losses attributable to trades or businesses of a taxpayer other than a corporation in excess of a $250,000 threshold amount, or $500,000 for a joint return) for a taxpayer other than a corporation, and carries such losses forward as part of the taxpayer's net operating loss in subsequent taxable years.

TAX REFORM

Some important features of the Act are as follows:

Business Taxation:

- **Corporate Tax Rate.** The maximum corporate tax rate is reduced from 35% to 21%, effective for taxable years beginning after December 31, 2017, and with no sunset provision.
  - Both earlier bills would have lowered the corporate tax rate to 20% rather than 21%. In addition, the lowered rate in the Senate bill would have been effective only for taxable years beginning after December 31, 2018, and the House bill would have taxed personal services corporations at a 25% rate.
- **Deduction for Passthrough "Qualified Business Income."** The Act allows a taxpayer other than a corporation to deduct the lesser of (i) 20% of that taxpayer's share of any "domestic qualified business income" of a passthrough (e.g., a partnership, S corporation, or sole proprietorship) and (ii) the greater of (a) 50% of the domestic wages paid with respect to the trade or business and (b) the sum of 25% of such wages and 2.5% of the unadjusted basis of all qualified property used in such trade or business. Assuming the full 20% deduction, the effective marginal rate is 29.6% in respect of such income for the highest earners. The deduction does not apply to income from certain services businesses (e.g., accounting, law, health, financial services, and other businesses for which the skill or reputation of the owner or employees is the principal asset), except in the case of individuals whose taxable income does not exceed $207,500. Also, qualified business income does not include investment-related income (other than certain dividends from REITs).
  - Under the Senate bill, an individual would have been allowed a 23% deduction, with different income thresholds and limitations. The House bill included a different regime, which would have favored capital owners and otherwise applied a default "70-30" split for active owners.
  - Qualified REIT dividends (REIT dividends other than capital gain dividends or dividends that qualify as qualified dividend income) are entitled to the deduction for passthrough qualified business income.
  - In an attempt to discourage aggressive use of this provision, the Act reduces the minimum understatement percentage before certain accuracy penalties apply.
- **Reduced Dividends-Received Deduction.** To preserve the effective tax rates on dividends received from domestic corporations, a corporation is only able to deduct 65% (down from 80%) of the amount of such dividends in which the receiving corporation owned 20% or more of the stock, and a corporation is only able to deduct 50% (down from 70%) of the amount of such dividends received from other domestic corporations.
- **Immediate Expensing of Capital Expenditures.** Like the Senate bill, the Act allows for temporary 100% expensing for property (other than real estate) acquired or placed in service after September 27, 2017 and before January 1, 2023, with the expensing percentage decreasing by 20% every year thereafter. The Act thus allows corporate taxpayers to claim an immediate deduction at the currently effective 35% corporate tax rate for 100% of the cost of qualified property acquired and placed in service after September 27, 2017 and before year end. The Act also includes the House bill's proposal to retain the phase-down of bonus depreciation for property acquired before September 28, 2017 and placed in service after September 28, 2017.
  - The House bill would only have allowed 100% expensing through 2022, without the subsequent phase-out.
- **Interest Deductibility Limited.** The deductibility of net business interest is effectively capped at 30% of EBITDA for five years, and then at 30% of EBIT thereafter (a compromise between the approaches of the House bill and the Senate bill). The net interest expense disallowance is determined at the entity level (e.g., at the partnership level instead of the partner level). Any disallowed amounts may be carried forward indefinitely, subject to a special rule for partnerships. Real estate firms, regulated utilities, and small businesses (with $25 million or less of gross receipts) are exempt from this limitation. The limitation also does not apply to interest on "floor

plan financing indebtedness" (indebtedness used to finance the acquisition of motor vehicles held for sale or lease or secured by such inventory). There is no grandfathering for preexisting debt.

- **Net Operating Losses.** Net operating losses arising after December 31, 2017 are deductible only to the extent of 80% of the taxpayer's taxable income, and can be carried forward indefinitely but generally cannot be carried back.
  - Under the House bill, net operating losses would have been deductible to the extent of 90% of the taxpayer's taxable income. The Senate bill had a similar 90% limitation, which would have decreased to 80% after December 1, 2022. The House bill would have increased amounts carried forward by an interest factor to preserve the value of those amounts.
- **Non-Qualified Deferred Compensation.** The Act does not change the taxation of non-qualified deferred compensation.
  - The original versions of the House bill and the Senate bill would have effectively eliminated deferred compensation by replacing the current law treatment of deferred compensation[2] with a new section that generally would have required income inclusion by the employee when the compensation vests (rather than when the compensation is paid). This proposal was subsequently removed from both earlier bills.
- **Limits on Executive Compensation Deductibility.** The Act removes the performance-based pay exception to the $1 million compensation deduction limit for compensation paid to "covered employees" in a publicly traded corporation,[3] so that compensation paid to such "covered employees" is no longer deductible for amounts above $1 million, even for performance-based pay. The Act also expands the definition of covered employees to include the CFO, in addition to the CEO and the three other highest paid officers, and the $1 million deduction limitation will apply to any person who was a covered employee in any tax year after 2016, not solely to individuals who were covered employees in the year compensation is paid.
  - Because the changes become effective beginning in taxable years after 2017, if a calendar-year taxpayer is able to properly deduct compensation in 2017 (as opposed to in 2018), such compensation will remain eligible for the current performance-based pay exception.
  - The Act also follows the Senate bill's transition rule, which provides that the changes will not apply to compensation paid pursuant to a written binding contract which was in effect on November 2, 2017 and which was not modified in any material respect on or after such date. The fact that a plan or contract was in existence on November 2, 2017 is not by itself sufficient to qualify the plan for this exception—the exception ceases to apply to amounts paid after there has been a material modification or renewal of the contract.
- **Some Business Tax Incentives Eliminated.** The Act eliminates some business tax incentives (e.g., the domestic production deduction), but fewer are eliminated than in the House bill. The R&D credit, the credit for the production of electricity from renewable resources (e.g., solar), and the low-income housing credit remain. Up to 80% of certain allowable credits may be used to reduce a taxpayer's base erosion minimum tax liability (see below).
- **Limitations on Certain Business Expense Deductions.** Under prior law, certain employer-provided meals were 100% deductible to the employer, but other meals were only 50% deductible. Consistent with the Senate bill, the Act makes all employer-provided meals only 50% deductible. Also consistent with the Senate bill, an employer may no longer deduct expenses associated with providing any qualified transportation fringe to its employees, and except as necessary for ensuring the safety of an employee, any expense incurred for providing transportation for commuting between the employee's residence and place of employment. Consistent with the House bill and the Senate bill, the Act also repeals the present-law exception

[2] Provided under Section 409A and 457A of the Code.

[3] Provided under Section 162(m) of the Code.

to the deduction disallowance for entertainment, amusement, or recreation that is directly related to (or, in certain cases, associated with) the active conduct of the taxpayer's trade or business.

- **Research and Experimental ("R&E") Expenditures.** R&E expenditures which are paid or incurred by a taxpayer in connection with the taxpayer's trade or business (including software development expenditures) must be capitalized and amortized over a five-year period (15 years if attributable to research conducted outside the United States) for taxable years beginning after December 31, 2025. The House bill and Senate bill contained minor differences.

- **Elimination of Corporate AMT.** The Alternative Minimum Tax ("AMT") is eliminated for corporations (the Senate bill would not have eliminated the Corporate AMT).

- **Expanded S Corporation Shareholders.** Like the Senate bill, the Act allows a nonresident alien individual to be a potential current beneficiary of an electing small business trust ("ESBT"), such that such beneficiary can be a shareholder of an S Corporation.

- **Charitable Contributions by Electing Small Business Trusts.** Like the Senate bill, the Act amends prior law by clarifying that the charitable contribution deduction allowed for the portion of an ESBT holding S corporation stock would be determined under the rules applicable to individuals, rather than those applicable to trusts.

- **Taxable Payments During S Corporation Post-Termination Transition Period.** Under existing law, for one year after converting from an S corporation (the "post-termination transition period"), a C corporation may treat distributions as being made out of S corporation E&P (tax-free to the extent of basis) rather than out of C corporation E&P (taxable as dividends). Like the Senate bill, the Act allows distributions from a C corporation made after the post-termination transition period to be treated as made ratably out of both S corporation E&P and C corporation E&P.

- **Technical Terminations of Partnerships Eliminated.** Like the House bill, the Act eliminates the rule that a partnership is treated as terminated if, within any 12-month period, there is a sale or exchange of 50% or more of the total interests in partnership capital and profits (a "technical termination").

- **Taxable Year of Inclusion for Income Recognized on Financial Statements.** Like the Senate bill, the Act requires a taxpayer to recognize an item of income no later than the taxable year in which such item is taken into account on GAAP or similar financial statements. However, the Act's conference report suggests that the scope of this change is narrower than had initially been thought.

- **Like-Kind Exchanges Limited to Real Property.** Deferral of gain on like-kind exchanges is only permitted with respect to real property. However, deferral of gain is still available for like-kind exchanges with respect to property other than real property if the property disposed of by the taxpayer is disposed of before January 1, 2018.

- **Contributions to Capital by Customer or Government.** Narrowing a more broadly worded proposal in the House bill, the Act repeals tax-free treatment for any contribution in aid of construction or any other contribution as a customer or potential customer, and any contribution by any governmental entity or civic group.

- **Limitation on Deduction for FDIC Premiums.** A percentage of amounts paid by insured depository institutions pursuant to an assessment by the FDIC to support the Deposit Insurance Fund is not deductible for institutions with total consolidated assets in excess of $10 billion. The percentage gradually declines to zero in proportion to the institution's consolidated assets.

- **No Provision for Corporate Integration.** The Act does not eliminate the double taxation of corporate profits, referred to as "corporate integration."

International Taxation:

- **Shift From "Worldwide" Taxation to "Territorial" Taxation.** A U.S. corporation that owns 10% or more of a foreign corporation is entitled to a 100% dividends-received deduction for the foreign-source portion of dividends paid by such foreign corporation (except for any dividend received by a U.S. shareholder from a controlled foreign corporation that received a deduction with respect to such dividend). However, the Subpart F regime (which requires immediate taxation of certain passive or portfolio income of foreign subsidiaries) is largely preserved. This shift to a territorial system does not change the treatment of U.S. corporations that operate abroad through branches, nor does it exempt from taxation gain arising from the sale of shares of subsidiary corporations (except to the extent otherwise recharacterized as dividends).

- **Mandatory Deemed Repatriation of Offshore Earnings and Profits.** In the last taxable year before January 1, 2018, the foreign earnings of any controlled foreign corporation or other foreign corporation in which a U.S. person owns a 10% voting interest,[4] which have not been repatriated to the United States, and which have therefore not yet been subject to U.S. taxation, would be deemed distributed to the U.S. shareholder. All earnings held in cash and cash equivalents would be taxed at a 15.5% rate (14% in the House bill and 14.5% in the Senate bill) and all other earnings would be taxed at an 8% rate (7% in the House bill and 7.5% in the Senate bill). At the election of the taxpayer, this tax may be paid over a period of eight years. The amount of earnings is determined as of November 2, 2017 or December 31, 2017, whichever is greater. Foreign tax credits triggered by the deemed repatriation are available to offset partially the tax resulting from the deemed repatriation. The benefits of the reduced rates upon repatriation would be recaptured if the U.S. company engages in an inversion transaction within 10 years (i.e., where a foreign corporation acquires a U.S. corporation and former shareholders of the U.S. corporation hold 60-80% of the stock of the combined entity). Special rules apply to defer the tax to a U.S. shareholder that is an S corporation.

- **Tax on "Global Intangible Low Taxed Income" ("GILTI").** GILTI is a newly created concept intended to capture the excess return (deemed to be attributable to intangibles) above a statutory 10% return on certain tangible investments (known as qualified business asset investment, or "QBAI"). GILTI is effectively taxed at 10.5% in 2018, with an allowance for 80% of the credit attributable to related foreign taxes (such that foreign income subject to a 13.125% tax rate or above is effectively exempt from the tax on GILTI). The effective rates change for future years as the amount of GILTI that is taken into account changes under the Act. The Act also provides for a special regime (taxed at 13.125%) for foreign-derived intangible income ("FDII") of U.S. corporations, most commonly understood as a "patent box"-like regime to benefit income on U.S. intangibles that are derived from outside of the United States.

  - The Act does not include the Senate bill's proposal that would have eliminated the potential tax on distributing IP back to the United States.

- **Base Erosion Minimum Tax ("BEAT").** Similar to the Senate bill, the Act includes a base erosion minimum tax, which is essentially a 10% minimum tax (11% for banks and registered securities dealers) calculated on a base equal to the taxpayer's income determined without tax deductions or other tax benefits arising from "base erosion" payments. A "base erosion payment" is generally an amount paid or accrued by a taxpayer to a related foreign person that is deductible to the taxpayer, but does not include cost of goods sold (except for payments to companies that invert after November 9, 2017) or qualified derivative payments. This provision only applies to corporations that have average annual gross receipts of at least $500 million (for the three prior tax years) and that have a "base erosion percentage" of at least 3% (2% for banks and registered securities dealers). The base erosion percentage means, for any taxable year, the percentage determined by dividing the corporation's base erosion tax benefits by the total deductions allowed with respect to the corporation. Up to 80% of certain allowable credits may be used to reduce the taxpayer's BEAT liability.

  - The Act does not include the House bill's proposal that would have subjected domestic corporations to a 20% excise tax on payments to a foreign affiliate.

[4] In the case of a foreign corporation that is not a controlled foreign corporation, at least one U.S. shareholder must be a domestic corporation.

- **U.S. Tax on Sale of Certain Partnership Interests.** Overturning a recent case decided by the Tax Court, but consistent with the IRS's position at least since a 1991 revenue ruling, the Act provides that a non-U.S. partner in a partnership recognizes gain or loss treated as "effectively connected" to a U.S. trade or business upon the sale of the partner's partnership interest, to the extent that the partner would be treated as having effectively connected income in a hypothetical sale of all the assets of the partnership. The transferee in such transaction must withhold 10% of the amount realized, unless the transferor certifies that it is not a nonresident alien or foreign corporation. This provision was in the Senate bill but not in the House bill.
- **No Worldwide Proportionality on Interest Deduction.** The Act does not include the provision from the House and Senate bills that would have limited the deductible net interest expense of a U.S. corporation to the extent the U.S. corporation's share of its multinational group's global net interest expense exceeds a certain percentage of the U.S. corporation's share of the group's global equity.
- **Denial of Deduction for Interest and Royalty Payments Involving Hybrid Entities.** As in the Senate bill, the Act denies a deduction with respect to certain payments of interest or royalties between related parties where the recipient is not required to include the payment in income under the tax law of its country of residence, is allowed a deduction with respect to such amount, or is a "hybrid entity" (i.e., is treated as a passthrough entity for U.S. tax purposes but not for foreign tax purposes, or vice versa).
- **Definition of "U.S. Shareholder" of a Controlled Foreign Corporation.** As in the Senate bill, the Act broadens the definition of "U.S. Shareholder" to include a person who owns 10% or more of a foreign company's stock by value (in addition to those who own 10% or more by vote, which was the test under prior law) for the purposes of determining whether a foreign corporation is a "controlled foreign corporation" and for purposes of the various changes described above.
- **No Holding Period for Controlled Foreign Corporations for Subpart F Inclusions.** The Act eliminates the requirement that a controlled foreign corporation must be controlled for an uninterrupted period of 30 days before Subpart F inclusions apply.
- **Inclusions for Increased Investment in United States Property.** Unlike the House and Senate bills, the Act does not eliminate Section 956 of the Code, which treats increased investment in United States property by a controlled foreign corporation as income currently includible for the U.S. parent. Combined with the new 100% dividends received deduction for U.S. corporate shareholders of a controlled foreign corporation, this means that the U.S. corporate parent would have includible income as a result of increased investment in U.S. property by a controlled foreign corporation, but would not have includible income if such controlled foreign corporation made an equal distribution to the U.S. corporation (even if then used to invest in U.S. property).
- **No Preferential Rates for Dividends From Inverted Companies.** Shareholders are not eligible for the lower rates that apply to certain "qualified" dividends if those dividends are received from a corporation that has engaged in an inversion transaction (i.e., where U.S. shareholders hold an inversion percentage in the 60-80% range). Unlike in the Senate bill, this provision applies only to foreign corporations that engage in inversion transactions after the date of enactment.
- **Source of Income From Sales of Inventory.** Income from the sale of inventory produced within the United States and sold outside the United States (and vice versa) is sourced solely based on the production activities with respect to the inventory.
- **Repeal of Active Trade or Business Exception for Outbound Transfers.** As in the Senate bill, the Act taxes outbound property transfers to a foreign corporation that otherwise would qualify for tax-free treatment, even if such property is for use by the foreign corporation in an active trade or business.
- **Outbound Transfers of Intangible Property.** As in the Senate bill, the Act confirms IRS authority on recent guidance in Treasury regulations proposed in September 2015, by providing that upon an outbound transfer of goodwill (foreign or domestic), workforce in place, or going concern value, a U.S. transferor would be subject to either current gain recognition or to a special

rule that requires inclusion of deemed royalties following such transfer, even if the value of the transferred property was created exclusively through offshore activities. The provision also confirms the IRS's authority to specify the method to be used to determine the value of the intangible property transferred.

Individual Taxation:[5]

- **Individual Tax Rates.** The seven marginal tax rates for individuals are modified, with a top rate of 37% for income in excess of $500,000 for individuals and $600,000 for married couples.
  - The House bill would have included only four brackets, maintaining the top marginal rate of 39.6%, as well as a "catch-up" provision to phase-out the benefit of the tax rate on the lowest tranche of income for the highest earners. The Senate bill would have had seven brackets, but with a top rate of 38.5%. In both earlier proposals, the top bracket would have applied to married couples only with income in excess of $1 million.
- **Doubled Standard Deduction and Eliminated Personal Exemptions.** The standard deduction is doubled, such that the first $12,000 of income for an individual is tax-free ($24,000 for married couples). Personal exemptions, on the other hand, are eliminated.
- **Changes to Itemized Deductions.** The limitation on the total amount of itemized deductions for high-income taxpayers (known as the "Pease" limitation) is repealed (although the limitation would have been less significant with the new limitations on the state and local tax and mortgage interest deductions). All "miscellaneous itemized deductions" that formerly could have been claimed if their aggregate amount exceeds 2% of the taxpayer's adjusted gross income are eliminated (e.g., deductible investment expenses from passthrough entities). The Act eliminates certain deductions such as the deduction for moving expenses, but retains, at least in part, many of the deductions that the House bill would have eliminated (e.g., student loan indebtedness, medical expenses, personal casualty losses).
- **State and Local Tax Deduction.** Individuals may deduct state and local property taxes and either income or sales taxes up to an aggregate of $10,000. The Act also includes a provision disallowing prepayment of state and local income taxes before January 1, 2018 to avoid the $10,000 limitation for taxable years after 2017. This change is most significant for high earners in states with high income taxes.
  - The House bill and Senate bill would have allowed individuals to deduct only $10,000 of state and local property taxes, not income or sales taxes.
- **Charitable Deduction.** The Act preserves the charitable deduction, with several minor changes.
- **Mortgage Interest Deduction.** The Act preserves the mortgage interest deduction for existing mortgages, and maintains the deduction for newly purchased homes up to $750,000, but suspends the deduction for interest on home equity indebtedness.
  - The House bill would have maintained the deduction for newly purchased homes only up to $500,000, whereas the Senate bill would have maintained the full $1,000,000 deduction for newly purchased homes previously allowable.
- **No Deduction for Alimony.** Under prior law, alimony payments were deductible to the payor and includible in the income of the recipient. Similar to the House bill, the Act reverses prior law by eliminating the deduction for alimony payments and not including such payment in the income of the recipient. Because alimony is typically paid from the higher-earning party, this will generally result in higher overall tax liability. These changes only apply to agreements executed after December 31, 2018.

[5] Similar to the Senate bill, but different from the House bill, many of the individual taxation changes, such as the altered tax brackets, the doubled standard deduction, and the changes to the mortgage interest and state and local tax deductions, only apply through December 31, 2025.

- **Excess Business Losses Disallowed.** The Act disallows "excess business losses" (losses attributable to trades or businesses of a taxpayer other than a corporation in excess of a $250,000 threshold amount, or $500,000 for a joint return) for a taxpayer other than a corporation, and carries such losses forward as part of the taxpayer's net operating loss in subsequent taxable years.

- **No Further Limits on Exclusion of Gain From Sale of Principal Residence.** The Act does not change rules regarding the exclusion of gain on the sale of a principal residence.
  - Under the House bill, gain on the sale of a principal residence would have been excludable only if the taxpayer lived in the residence for five of the previous eight years, and would have been phased out by one dollar for every dollar by which the taxpayer's adjusted gross income exceeds $250,000 ($500,000 for married couples). The Senate bill would have generally followed the House bill, without the phase-out provision.
- **Application of Self-Employment Tax to Allocations of Passthrough Income.** The Act retains the current rules on the application of payroll taxes to amounts received through a passthrough entity.
- **Elimination of Individual Mandate.** Like the Senate bill, the Act reduces the individual shared responsibility payment imposed under the Affordable Care Act for failure to maintain essential health coverage (the "individual mandate") to zero.
- **No "Rothification" of Retirement Accounts.** The Act preserves the tax treatment of traditional defined contribution plans (e.g., 401(k)s), which allow the employee to invest pre-tax money (only subject to tax on withdrawal).
- **No Changes to Identification of Specified Securities.** The Act does not contain the provision in the Senate bill that would have required lots of specified securities purchased at different prices to be sold on a first-in first-out ("FIFO") basis.
- **Individual AMT Not Eliminated.** Like the Senate bill (but unlike the House bill), the Act retains the individual AMT, although with increased exemption amounts. The increased threshold for the individual AMT is phased out gradually, returning to the previous exemption levels after the 2025 taxable year. However, the AMT is expected to apply to fewer taxpayers with the limitations on the deductibility of state and local taxes.
- **Elimination of Certain Employee Exclusions and Deductions.** The exclusion for qualified moving expense reimbursement, as well as the qualified bicycle reimbursement, is eliminated. Notably, however, the exclusions for adoption assistance programs and dependent care programs are untouched (unlike in the House bill).
- **Estate, Gift, and Generation-Skipping Transfer Taxes.** The Act follows the Senate bill, doubling the estate, gift, and generation-skipping transfer tax exemption amount (to $11.2 million per person (or $22.4 million for a married couple) in 2018, adjusted annually for inflation). The Act does not repeal the estate and generation-skipping transfer taxes, as the House bill would have done. No other changes are made to the estate and gift tax regime.
- **Self-Created Intangibles Not Capital Assets.** Like the House bill, the Act excludes certain self-created intangibles (patents, inventions, models or designs, or secret formulas or processes) from the definition of a "capital asset" so that any gain or loss on the sale or exchange of such property will not receive capital gain treatment. This provision does not apply to goodwill.
- **Required Holding Period for "Carried Interest" Treatment Increased.** The Act treats capital gain allocated from a partnership interest received as a "carried interest" as short-term capital gain unless the partnership has a holding period on the sold asset of more than three years.

Changes Applicable to Tax-Exempt Organizations:

- **Excise Tax for Compensation in Excess of $1 Million.** Tax-exempt organizations are subject to a 21% tax on compensation in excess of $1 million paid to any "covered employee," which, for this purpose, includes the organization's five highest-paid employees for the tax year and any person that was a "covered employee" for any tax year after 2016.

- The excise tax was 20% under the House and Senate bills.

- **No Application of UBIT to Public Pension Plans.** Following the Senate bill, the Act does not cause state and local government pension plans, which are generally exempt from tax, to be subject to the "unrelated business income tax." The House bill would have done so.
- **Investment Income Excise Tax on Private Colleges and Universities.** Certain large private college and university endowments are subject to a 1.4% excise tax on net investment income. However, unlike in the House bill, the excise tax that applies to private foundations is unchanged.

Questions regarding the Act may be directed to any member of the Tax Group. Contact information is available on the final page of this memorandum.

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CONTACTS

New York			
	Ronald E. Creamer Jr.	+1-212-558-4665	creamerr@sullcrom.com
	David P. Hariton	+1-212-558-4248	haritond@sullcrom.com
	Jeffrey D. Hochberg	+1-212-558-3266	hochbergj@sullcrom.com
	Donald L. Korb	+1-212-558-4822	korbd@sullcrom.com
	Andrew S. Mason	+1-212-558-3759	masona@sullcrom.com
	Andrew P. Solomon	+1-212-558-3783	solomona@sullcrom.com
	David C. Spitzer	+1-212-558-4376	spitzerd@sullcrom.com
	Davis J. Wang	+1-212-558-3113	wangd@sullcrom.com
	S. Eric Wang	+1-212-558-3328	wangs@sullcrom.com
	Isaac J. Wheeler	+1-212-558-7863	wheeleri@sullcrom.com
	T. Max O'Neill	+1-212-558-4485	oneillt@sullcrom.com
	David M. Simins	+1-212-558-3781	siminsd@sullcrom.com
London			
	Ronald E. Creamer Jr.	+44-20-7959-8525	creamerr@sullcrom.com
	S. Eric Wang	+44-20-7959-8411	wangs@sullcrom.com
Washington, D.C.			
	Donald L. Korb	+1-202-956-7675	korbd@sullcrom.com

SULLIVAN & CROMWELL LLP

December 22, 2017

U.S. Tax Reform

Insurance Company Provisions

SUMMARY

On December 20, Congress voted to pass a comprehensive tax reform bill (the "Act"),[1] and today, the President signed the Act into law. The Act represents the most significant reform of the U.S. tax code in over 30 years.

The Act is generally consistent with the proposals contained in the bill released by the Senate on November 14 (the "Senate bill"), but also incorporates certain provisions of the bill released by the House of Representatives on November 2 and amended thereafter (the "House bill"). The Act also removes some provisions that were contained in both earlier draft bills, and includes some new provisions that were contained in neither draft bill.

This memorandum describes some of the important features of the legislation which will impact the taxation of insurance companies, and highlights certain areas where the Act diverges from the earlier draft legislation.

Other provisions in the Act which affect corporations and multinationals could also impact insurance companies, including, among others, provisions which implement a lower corporate tax rate, a shift to a territorial tax system, the mandatory deemed repatriation of offshore earnings and profits, changes in the determination of whether a foreign corporation is a "controlled foreign corporation," and new limits on interest deductibility. These provisions are described in a separate memorandum, which may be obtained by following the instructions at the end of this memorandum.

Most of the provisions described below will be effective for tax years beginning after 2017.

Life Insurance Company Provisions:

- ***Modifications of net operating loss carryover rules.*** Life insurance companies will not be allowed to carry net operating losses back to prior tax years, but will be allowed to carry net operating losses forward indefinitely (as opposed to a three-year period for carrybacks and a 15-year period for carryforwards under prior law), in conformity with the general net operating loss carryover rules. Net operating losses arising after December 31, 2017 are deductible only to the extent of 80% of the taxpayer's taxable income.

  - Under some versions of the House bill, net operating losses would have been deductible to the extent of 90% of the taxpayer's taxable income. The Senate bill had a similar 90% limitation, which would have decreased to 80% after December 1, 2022. The House bill would have increased amounts carried forward by an interest factor to preserve the value of those amounts.
  - The rules for property and casualty companies will not change.

- ***Revisions of the capitalization rule for deferred acquisition costs ("DAC").*** The DAC rules are revised to extend the amortization period from 120 months to 180 months and to amend the capitalization rates to 2.09% for annuity contracts (from 1.75% under prior law), 2.45% for group life contracts (from 2.05%), and 9.2% for all other specified contracts (from 7.7%).
  - Under the House bill, the amortization period would not have been extended and the DAC rules would have been revised to replace the existing three categories of insurance contracts with only two categories: (1) group contracts, which would be capitalized at a 4% rate, and (2) all other specified contracts, which would be capitalized at an 11% rate. Under the Senate bill, the capitalization rates would have been 2.1% for annuity contracts, 2.46% for group life contracts, and 9.24% for all other specified contracts.
- ***Modification of rules for determining the dividends-received deduction.*** A life insurance company's share of dividends, for purposes of computing its dividends-received deduction, will be fixed at 70%, rather than being determined pursuant to a proration formula.
  - Some versions of the House bill would have fixed the company's share at 40%.
- ***Computation of life insurance reserves.*** Life insurance companies will take into account with respect to any contract (other than certain variable contracts, which are subject to a special rule) the greater of the net surrender value of the contract or 92.81% of statutory reserves in calculating increases in reserves. A rule against double counting provides that no amount may be taken into account more than once in determining reserves. The effect of the provision on computing reserves for contracts issued before the effective date will be taken into account ratably over the succeeding eight tax years.
  - Under the Senate bill, the computation would have been the greater of the net surrender value of the contract or 92.87% of statutory reserves. Some versions of the House bill included only a specified percentage (76.5%) that would have been taken into account, rather than a "greater of" formula.
- ***Adjustment for change in computing reserves.*** Under prior law, life insurance companies took into account changes in taxable income as a result of an adjustment in the method of computing reserves over 10 years. Under the Act, life insurance companies will take such adjustments into account in the same manner as non-life insurance companies (*i.e.*, in the tax year during which the accounting method change occurs for an adjustment that reduces taxable income, or over the course of four tax years for an adjustment that increases taxable income).
- ***Reporting requirements for acquisitions of life insurance contracts.*** A direct or indirect purchaser of a life insurance contract, which contract insures the life of a person unrelated to the purchaser, will be required to report tax information about the purchase to the IRS and to the issuer and seller of the contract. Upon receipt of such information, or upon receipt of any form of notice of the transfer of a life insurance contract to a foreign person, the issuer will be required to report the basis of the contract and certain other information to the IRS. An insurance company that pays death benefits under a life insurance contract that was transferred in a reportable sale will be required to report information about the payment of benefits to both the IRS and the payee.

- ***Repeal of special estimated tax payments.*** The election to claim a deduction equal to the difference between the amount of reserves computed on a discounted basis and the amount computed on an undiscounted basis and related special estimated tax payment rules is repealed.
- ***Repeal of special rule for distributions to shareholders from pre-1984 policyholders surplus accounts.*** The rules for policyholders' surplus accounts (keeping track of operating income which would be taxed only when distributed) are repealed. Any remaining balances (as of the effective date) will be subject to tax, payable in eight annual installments.
- ***No surtax on life insurance income.*** The second amendment to the House bill introduced by Chairman Brady included a placeholder provision imposing an 8% surtax on life insurance income. This surtax is not included in the Act.

Property and Casualty Insurance Company Provisions:

- ***Modification of proration rules for property and casualty insurance companies*.** Under prior law, property and casualty insurance companies were required to reduce the amount of their reserve deductions by 15% of (1) the company's tax-exempt interest, (2) the deductible portion of dividends received, and (3) the increase for the tax year in the cash value of life insurance, endowment, or annuity contracts the company owns. Under the Act, the 15% reduction is replaced with a reduction equal to 5.25% divided by the top corporate tax rate, meaning that, for 2018 and subsequent years, the percentage reduction will be 25%.
  - Under the House bill, the reduction in the reserve deductions of property and casualty insurance companies would have been increased to 26.25%.
- ***Modification of discounting rules for property and casualty insurance companies.*** A property and casualty insurance company will be required to discount unpaid losses by corporate bond yields (as specified by Treasury), as opposed to mid-term applicable Federal rates. In addition, the special rule that extends the loss payment pattern period for long-tail lines of business now will apply such that the 10-year period will be subject to extension for up to 14 additional years (instead of 15 more years under the House bill). The Act also repeals the election to use company-specific, rather than industry-wide, historical loss payment patterns. A transition rule spreads adjustments relating to pre-effective date losses and expenses over the first tax year beginning after 2017 and the succeeding seven tax years.

International Provisions:

- ***Base Erosion Minimum Tax ("BEAT").*** Similar to the Senate bill, the Act includes a base erosion minimum tax, which is essentially a 10% minimum tax calculated on a base equal to the taxpayer's income determined without tax deductions or other tax benefits arising from "base erosion" payments. A "base erosion payment" is generally an amount paid or accrued by a taxpayer to a related foreign person that is deductible to the taxpayer, but does not include cost of goods sold or qualified derivative payments. Cross-border reinsurance premiums are specifically included as base erosion payments. The provision only applies to corporations that have average annual gross receipts of at least $500 million (for the three prior tax years) and that have a "base erosion percentage" of at least 3%. The base erosion percentage means, for any taxable year, the percentage determined by dividing the corporation's base erosion tax benefits by the total deductions allowed with respect to the corporation.
  - The 20% excise tax that domestic corporations would have been subject to when making certain deductible payments to a foreign affiliate under the House bill, unless the affiliated foreign corporation elected to treat the payments as effectively connected income—which presumably would have applied to reinsurance transactions with foreign affiliates—is not included in the Act.
- ***Restriction on insurance business exception to passive foreign investment company ("PFIC") rules.*** The PFIC exception for insurance companies is amended to apply only if the foreign corporation would be taxed as an insurance company were it a U.S. corporation and if

loss and loss adjustment expenses and certain reserves constitute more than 25% of the foreign corporation's total assets (or 10% if the corporation is predominantly engaged in an insurance business and the reason for the percentage falling below 25% is solely due to temporary circumstances).

* * *

ENDNOTES

[1] The Act is commonly referred to as the "Tax Cuts and Jobs Act," but the formal name for the Act is "An act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018."

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CONTACTS

New York			
	Ronald E. Creamer Jr.	+1-212-558-4665	creamerr@sullcrom.com
	David C. Spitzer	+1-212-558-4376	spitzerd@sullcrom.com
	S. Eric Wang	+1-212-558-3328	wangs@sullcrom.com
	Eric M. Lopata	+1-212-558-4164	lopatae@sullcrom.com
London			
	Ronald E. Creamer Jr.	+44-20-7959-8525	creamerr@sullcrom.com
	S. Eric Wang	+44-20-7959-8411	wangs@sullcrom.com

SULLIVAN & CROMWELL LLP

December 28, 2017

U.S. Tax Reform

Infrastructure Provisions

On December 20, Congress voted to pass a comprehensive tax reform bill (the "Act"), and the President signed the Act into law two days later. The Act represents the most significant reform of the U.S. tax code in over 30 years.

The Act is generally consistent with the proposals contained in the bill released by the Senate on November 14 (the "Senate bill"), but it also incorporates certain provisions of the bill released by the House of Representatives on November 2 and amended thereafter (the "House bill"). The Act also removes some provisions that were contained in both earlier draft bills, and includes some new provisions that were contained in neither draft bill.

This memorandum describes some of the important features of the legislation that will affect the taxation of infrastructure investors and investments, and highlights certain areas where the Act diverges from the earlier draft legislation. Whether these provisions will have a positive or negative impact on infrastructure investors or investments—whether greenfield or brownfield—will depend on the facts of each particular investor, investment or project.

Other provisions in the Act affecting corporations and multinationals could also have an impact on infrastructure investors and investments, including, among others, provisions that implement a shift to a territorial tax system and the mandatory deemed repatriation of offshore earnings and profits. These provisions are described in a separate memorandum, which may be obtained by following the instructions at the end of this memorandum.

Most of the provisions described below will be effective for tax years beginning after 2017.

Corporate Tax Rate:

- The maximum corporate tax rate is reduced from 35% to 21%, effective for taxable years beginning after December 31, 2017, and with no sunset provision.

Business-Related Exclusion and Deduction Provisions:

- ***Immediate Expensing of Capital Expenditures*.** Like the Senate bill, the Act allows for temporary 100% expensing for property (other than real estate) acquired or placed in service after September 27, 2017 and before January 1, 2023, with the expensing percentage decreasing by 20% every year thereafter. The Act thus allows corporate taxpayers to claim an immediate deduction at the currently effective 35% corporate tax rate for 100% of the cost of qualified property acquired and placed in service after September 27, 2017 but before this year-end. The Act also includes the House bill's proposal to retain the phase-down of bonus depreciation for property acquired before September 28, 2017 and placed in service after that day.
  - The House bill would have allowed 100% expensing only through 2022, without the subsequent phase-down.
- ***Interest Deductibility Limited*.** The deductibility of net business interest is effectively capped at 30% of EBITDA for five years, and then at 30% of EBIT thereafter. The net interest expense disallowance would be determined at the entity level (e.g., at the partnership level instead of the partner level). Any disallowed amounts may be carried forward indefinitely, subject to a special rule for partnerships. Real estate firms, regulated utilities, and small businesses (with $25 million or less of gross receipts) would be exempt from this limitation. The limitation also does not apply to interest on "floor plan financing indebtedness" (indebtedness used to finance the acquisition of motor vehicles held for sale or lease or secured by such inventory). There is no grandfathering for preexisting debt.
- ***Net Operating Losses*.** Net operating losses arising after December 31, 2017 are deductible only to the extent of 80% of the taxpayer's taxable income, and can be carried forward indefinitely but generally cannot be carried back.
- ***Contributions to Capital.*** Current law provides that the gross income of a corporation generally does not include contributions to the corporation's capital. Narrowing a more broadly worded proposal in the House bill, the Act repeals this tax-free treatment for any contribution in aid of construction or any other contribution as a customer or potential customer, and any contribution by any governmental entity or civic group, in each case for any contributions made after December 22, 2017. However, the Act will not apply to any such contribution made by a governmental entity pursuant to a master development plan that was approved prior to December 22, 2017.
- ***Energy Credit Provisions.*** The House version of the Act would have amended the application of investment and production tax credits that taxpayers may claim in relation to energy production. The Act does not include any of these provisions from the House version.

Bond Provisions:

- ***Repeal of Advance Refunding Bonds*.** Under current law, bonds that are used to pay principal, interest, or redemption price on a prior bond issue (the refunded bond) are categorized as either (i) current (where the refunding bond is issued not more than 90 days before redemption) or (ii) advance (where the refunding bond is issued more than 90 days before redemption). While interest on current refunding bonds is generally not taxable, interest on advance refunding bonds is generally taxable in the case of private activity bonds ("PABs"). Under the Act, interest on all advance refunding bonds issued after 2017 would be includible in gross income.
- ***Repeal of Tax Credit Bonds*.** Tax credit bonds (generally, bonds with respect to which the holder receives a federal tax credit or where, for certain issuances, the issuer had the option of instead issuing taxable bonds and receiving a federal subsidy in the form of a direct payment) have been available to finance specified kinds of projects, subject, in certain cases, to volume caps and allocations. Under the Act, the authority to issue and the rules relating to tax credit

bonds generally are repealed for bonds issued after 2017. Repeal will have no impact on the tax treatment of existing tax credit bonds.

- ***Private Activity Bonds.*** The House version of the Act would have terminated the exclusion from gross income for interest paid on PABs issued after 2017. The Act does not include this provision from the House version.

International Provisions:

- ***Base Erosion Minimum Tax ("BEAT").*** Similar to the Senate bill, the Act includes a base erosion minimum tax, which is essentially a 10% minimum tax (11% for banks and registered securities dealers) calculated on a base equal to the taxpayer's income determined without tax deductions or other tax benefits arising from "base erosion payments." A "base erosion payment" is generally an amount paid or accrued by a taxpayer to a related foreign person that is deductible to the taxpayer, but does not include cost of goods sold (except for payments to companies that invert after November 9, 2017) or qualified derivative payments. This provision applies only to corporations that have average annual gross receipts of at least $500 million (for the three prior tax years) and that have a "base erosion percentage" of at least 3% (2% for banks and registered securities dealers). The base erosion percentage means, for any taxable year, the percentage determined by dividing the corporation's base erosion tax benefits by the total deductions allowed with respect to the corporation. Up to 80% of certain allowable credits may be used to reduce the taxpayer's BEAT liability. The Act does not include the House bill's proposal that would have subjected domestic corporations to a 20% excise tax on payments to a foreign affiliate.
- ***U.S. Tax on Sale of Certain Partnership Interests.*** Overturning a recent case decided by the Tax Court, but consistent with the IRS's position at least since a 1991 revenue ruling, the Act provides that a non-U.S. partner in a partnership recognizes gain or loss treated as "effectively connected" to a U.S. trade or business upon the sale of the partner's partnership interest, to the extent that the partner would be treated as having effectively connected income in a hypothetical sale of all the assets of the partnership. The transferee in such transaction must withhold 10% of the amount realized, unless the transferor certifies that it is not a nonresident alien or foreign corporation. This provision was in the Senate bill but not in the House bill.
- ***No Worldwide Proportionality on Interest Deduction.*** The Act does not include the provision from the House and Senate bills that would have limited the deductible net interest expense of a U.S. corporation to the extent the U.S. corporation's share of its multinational group's global net interest expense exceeds a certain percentage of the U.S. corporation's share of the group's global equity.

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CONTACTS

New York		
Ronald E. Creamer Jr.	+1-212-558-4665	creamerr@sullcrom.com
Christopher L. Mann	+1-212-558-4625	mannc@sullcrom.com
David C. Spitzer	+1-212-558-4376	spitzerd@sullcrom.com
Michelle H. Lu	+1-212-558-3204	lum@sullcrom.com
London		
Ronald E. Creamer Jr.	+44-20-7959-8525	creamerr@sullcrom.com

January 2, 2018

U.S. Tax Reform

Mergers and Acquisitions Considerations

SUMMARY

On December 20, 2017, Congress voted to pass a comprehensive tax reform bill (the "Act"), and the President signed the Act into law two days later. The Act represents the most significant reform of the U.S. tax code in over 30 years.

This memorandum includes some observations on the Act's potential impact on mergers and acquisitions activity going forward.

Generally, we would expect the lowered corporate tax rate to have a positive effect on M&A activity. A lower tax rate is likely to enhance the after-tax return of synergies from combining or separating entities. The enhanced return may help facilitate M&A transactions, and potentially "bridge" the pricing gap between buyer and seller.

TAXABLE VS. TAX-FREE TRANSACTIONS:

- **Increased Available Cash.** There should be significantly more cash available for acquisitions of U.S. companies and assets due to the mandatory deemed repatriation of offshore earnings and profits, combined with the 100% dividends received deduction from a U.S. corporation's foreign subsidiaries. (As a technical matter, this "participation exemption" applies to the foreign-source portion of dividends distributed from a controlled foreign corporation to a "10% shareholder." For this purpose, a 10% shareholder is a shareholder that owns 10% or more of the vote or value of any foreign corporation, and a controlled foreign corporation is a foreign corporation more than 50%-owned by 10% shareholders.)
- **Effect of Immediate Expensing of Capital Expenditures.** Although the immediate expensing of capital expenditures makes taxable transactions more attractive, we do not expect to see a significant shift away from the paradigm wherein sellers favor tax-free transactions and buyers favor taxable transactions. The immediate 100% deduction mostly applies to property that was already subject to an immediate 50% deduction under prior law (mostly machinery and tangible goods), and not to property like real property, intellectual property, and goodwill. As a result, a taxable transaction is still a trade-off between immediate

tax to the seller and a future benefit to the buyer. Moreover, there may be limited financial statement benefit (other than timing) to the accelerated depreciation of properties otherwise entitled to bonus depreciation.

- **Reduced Benefit of Tax-Free Spinoffs.** The benefit of tax-free spinoffs is significantly reduced. As a result, there are likely to be more taxable separations (including spinoffs electing to be treated like sales under Section 336(e)). Splitoffs and debt-for-stock exchanges in the context of spinoffs may also appear incrementally less attractive relative to taxable separations (e.g., a sale) in the lower tax rate environment.

- **Tax Due Diligence.** M&A tax due diligence procedures should be reviewed in light of the changes in the Act. For example, until balance sheets and income statements catch up to the changes in the Act, acquirors should carefully examine the current and deferred tax accounts on a target's financial statements.

FINANCING:

- **Availability of Offshore Cash.** Although foreign subsidiaries still cannot guarantee the debt of a U.S. parent, such subsidiaries may generally distribute cash to the U.S. parent as a tax-free dividend. As "offshore" cash becomes "untrapped," takeovers (particularly leveraged buyouts) relying on the "cash pile" of targets may become more prominent and frequent.

- **Debt Limitations in Leveraged Deals.** Although the 30% of adjusted taxable income limitation on interest deductibility (EBITDA for five years, EBIT thereafter) is expected to hurt only a minority of publicly traded U.S. corporations, this limitation will have a significant impact on leveraged buyouts and other debt-intensive deals (especially those in private equity). The use of alternatives to debt will become more frequent.

- **Effect of Base Erosion Anti-Abuse Tax on Certain Acquisitions.** Multinational corporations that make payments to foreign affiliates resulting in deductions equal to 3% or more of their total deductions may be subject to a base erosion anti-abuse tax ("BEAT"). Planning will be essential when financing U.S. acquisitions with debt from a related foreign party. In addition, BEAT will have to be considered in the context of cross-border M&A to the extent that post-combination planning would involve payments from the United States to foreign affiliates.

- **Decreased Attractiveness of "Debt" Financing.** Corporations that may be affected by the interest deductibility limitation are likely to structure certain acquisitions as leases, swaps, derivatives, etc., rather than as debt, so as to avoid interest deductions that exceed 30% of taxable income. The use of preferred partnership interests in Up-C types of structures may also become more prevalent.

ENTITY CHOICE:

- **Tax Inefficiency of Corporate Form Reduced.** The overall corporate marginal rate (combining the corporate tax rate and the top 20% individual rate on dividend income) is reduced from 48% to 36.8%, a 21.5% increase in after-tax cash. The overall passthrough marginal rate (assuming full benefit of the new 20% passthrough deduction) is reduced from 39.6% to 29.6%, a 16.6% increase in after-tax cash.[1] The relative tax inefficiency of the corporate form (measured in terms of after-tax cash) is somewhat reduced, so the Act is unlikely to create a wave of conversions from corporate to partnership form. In addition, many publicly traded partnerships (other than in real estate or oil & gas) must sit on top of a corporation, making the rate differences irrelevant. Partnerships may instead contemplate conversion to corporations to take advantage of the lower-taxed compounding of earnings inside a corporation, but such conversions must consider the impact of the accumulated

[1] These calculations do not include the 3.8% Medicare tax on net investment income, which may not apply to certain passthrough entities.

earnings tax (a 20% tax on earnings that accumulate "beyond the reasonable needs of the business") and the possibility of future legislative change that increases the corporate rate.

- **Increased Attractiveness of "Up-C" Structure.** By using an Up-C structure, private investors can benefit from the passthrough deduction as well as a public "valuation" and liquidity for their investment. The operating partnership can also issue preferred equity interests rather than debt, so as to avoid the interest deductibility limitation. The operating partnership may also avoid the limitation on deductibility of executive compensation above $1 million (under Section 162(m)), which only applies to publicly traded corporations.
- **Potential Conversions of C Corporations to S Corporations.** Because it has become easier to qualify as an S corporation, C corporations that distribute their cash may be more tempted to convert to S corporations. In addition, for C corporations that were already planning to convert to a passthrough structure, there are incentives to do so now while there is a relatively low corporate tax rate levied on exit.

INTERNATIONAL CONSIDERATIONS:

- **"Inversion Percentage" Likely to Stay Below 60%.** Under prior law, where a foreign corporation acquired a U.S. corporation and former shareholders of the U.S. corporation held between 60% and 80% of the stock of the combined entity (the "inversion percentage") the combined entity was respected as a foreign corporation, but certain negative consequences (such as restrictions on "offshore cash" and recognition of gains on certain intercompany transactions) applied. The Act adds a number of further restrictions to such "60-80% corporations," such that it would be even more desirable to keep the inversion percentage under 60%. The benefits of the reduced rates upon the mandatory deemed repatriation of offshore earnings and profits will be recaptured if a U.S. corporation engages in such an inversion transaction within 10 years of the Act's enactment (December 22, 2017), the dividends of a company that "inverts" post-enactment will not qualify for the preferential 20% rate applicable to qualified dividends, and the cost of goods sold to a related party, for company that inverts after November 9, 2017, will not be excepted when calculating the BEAT (certain U.S. corporations could have significant exclusions from income attributable to the cost of goods sold to related foreign parties).
- **Impact on "Topco Choice."** With the lower corporate rate and shift to a quasi-territorial system of taxation, structuring a combination between a U.S. and a foreign corporation with a U.S. corporation as the parent is more appealing than under prior law. However, the new U.S. system is not a true territorial system like that of many other competing jurisdictions—the sale of foreign subsidiaries is still taxable for all gain that is not attributable to earnings and profits, the Act includes two new base erosion regimes, the BEAT and the tax on global intangible low-tax income ("GILTI"), and foreign subsidiaries still cannot directly invest in U.S. property without triggering a current inclusion for their U.S. parent. In addition, the new U.S. tax system is newer than more established regimes, and there could be more risk that it will change in the future (e.g., the corporate tax rate will increase).
- **Base Erosion Deterred but Not Eliminated.** The Act includes several changes that reduce incentives for U.S. corporations to move their operations and income offshore, but some incentives still remain. The new 21% U.S. corporate tax rate, although lower than the previous 35% rate, is still higher than competing corporate rates in countries like the UK and Ireland, and the income that is "stripped" from the United States may result in inclusions that are effectively taxed much lower than the "headline" rate. Multilateral efforts to prevent base erosion and to restrict "hybrid" payments (deductible in one country but not includible in income in another) may have more impact on base erosion in the long run.

TAX BENEFITS AND SPECIAL SITUATIONS:

- **Value of Tax Receivable Agreement Payments Reduced.** The benefit of payments under a tax receivable agreement ("TRA") for Up-Cs is significantly reduced, due to the lower corporate rate. This creates opportunities to acquire entities with outstanding TRA payments.

- **Present Value of Certain Tax Benefits Reduced.** The present value of certain tax benefits such as net operating losses ("NOLs") is reduced in the lower corporate tax rate environment, although future NOLs may only offset 80% of taxable income for a given year. Moreover, new NOLs never expire, which lessens the relevance of some of the ownership limitations regarding NOLs.

Questions regarding the Act may be directed to any member of the Tax Group. Contact information is available on the final page of this memorandum.

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CONTACTS

New York			
	Ronald E. Creamer Jr.	+1-212-558-4665	creamerr@sullcrom.com
	David P. Hariton	+1-212-558-4248	haritond@sullcrom.com
	Jeffrey D. Hochberg	+1-212-558-3266	hochbergj@sullcrom.com
	Donald L. Korb	+1-212-558-4822	korbd@sullcrom.com
	Andrew S. Mason	+1-212-558-3759	masona@sullcrom.com
	Andrew P. Solomon	+1-212-558-3783	solomona@sullcrom.com
	David C. Spitzer	+1-212-558-4376	spitzerd@sullcrom.com
	Davis J. Wang	+1-212-558-3113	wangd@sullcrom.com
	S. Eric Wang	+1-212-558-3328	wangs@sullcrom.com
	Isaac J. Wheeler	+1-212-558-7863	wheeleri@sullcrom.com
	David M. Simins	+1-212-558-3781	siminsd@sullcrom.com
London			
	Ronald E. Creamer Jr.	+44-20-7959-8525	creamerr@sullcrom.com
	S. Eric Wang	+44-20-7959-8411	wangs@sullcrom.com
Washington, D.C.			
	Donald L. Korb	+1-202-956-7675	korbd@sullcrom.com

SULLIVAN & CROMWELL LLP

January 8, 2018

U.S. Tax Reform

Individual Taxation

SUMMARY

The Tax Cuts and Jobs Act of 2017 (the "Act"), which was enacted into law last December, represents the most significant reform of the U.S. tax code in over 30 years.

This memorandum describes some of the important features of the legislation that will affect the taxation of individuals. Most of the provisions described below become effective for years beginning after 2017 and ending on or before December 31, 2025. Those with different effective dates are noted.

Individual Taxes (Income, AMT, Estate & Gift):

- **Individual Tax Rates.** The seven marginal tax rates for individuals are modified, with a top rate of 37% for income in excess of $500,000 for individuals and $600,000 for married couples. The changed individual tax rate structure does not apply to the maximum rates on net capital gain and qualified dividends, which remain unchanged.
- **Individual AMT Not Eliminated.** The Act retains the individual AMT, although with increased exemption amounts (the amount of alternative minimum taxable income ("AMTI") exempt from the AMT) and phaseout thresholds (the cap on total AMTI that may be subject to the AMT). However, the exemption amount continues to phase out if AMTI exceeds certain threshold amounts. With these changes, in addition to the limitations on the deductibility of state and local taxes discussed below and the elimination of deductions for most miscellaneous itemized deductions, the AMT is expected to apply to fewer taxpayers while the temporary changes are effective. These increases do not apply to estates or trusts.
- **Estate, Gift, and Generation-Skipping Transfer Taxes.** The Act doubles the estate, gift, and generation-skipping transfer tax exclusion amount (to approximately $11.2 million per person (or $22.4 million for a married couple) in 2018, adjusted annually for inflation), but does not repeal the estate, gift, and generation-skipping transfer taxes. No other changes are made to the estate and gift tax regime. Because the exclusion amount is only doubled through 2025, individuals should consider making larger gifts that use the exclusion amount before January 1, 2026.

Deductions and Exclusions for Individuals:

- **Doubled Standard Deduction and Eliminated Personal Exemptions.** The standard deduction is doubled to $12,000 for an individual and $24,000 for married couples. Personal and dependency exemptions, on the other hand, are eliminated.
- **Changes to Itemized Deductions.** All "miscellaneous itemized deductions" that previously could have been claimed to the extent their aggregate amount exceeded 2% of the taxpayer's adjusted gross income are eliminated (e.g., deductible investment expenses from passthrough entities). The limitation on the total amount of itemized deductions for high-income taxpayers (known as the "Pease" limitation) is repealed. The Act eliminates the deduction for moving expenses, but retains, at least in part, many of the deductions that the House bill would have eliminated (e.g., interest on student loan indebtedness, medical expenses, personal casualty losses). For tax years beginning after December 31, 2016 and before January 1, 2019, medical expenses of a taxpayer or such taxpayer's spouse or dependents are deductible if they exceed 7.5% of a taxpayer's adjusted gross income (rather than 10% under prior law).
- **State and Local Tax Deduction.** Individuals may deduct state and local property taxes and either income or sales taxes up to an aggregate of $10,000. While the limitation applies to state and local income taxes imposed on a taxpayer's allocable share of income earned in a trade or business, there is no limitation on the deduction of state and local taxes paid or accrued by a trade or business itself (such as the New York City unincorporated business tax), or on property held for the production of income.
- **Charitable Deduction.** The Act preserves the charitable deduction and increases the limitation on cash donated to public charities to 60% of adjusted gross income computed without regard to any net operating loss carryback, up from 50% under prior law.
- **Mortgage Interest Deduction.** The Act preserves the mortgage interest deduction for existing mortgages, and maintains the deduction for newly purchased homes (first and second homes) up to an aggregate of $750,000 for acquisition debt incurred after December 15, 2017 ($375,000 if married filing separately), but eliminates the deduction for interest on home equity indebtedness.
- **No Deduction for Alimony.** Under prior law, alimony payments were deductible to the payor and includible in the income of the recipient. The Act reverses prior law by eliminating the deduction for alimony payments and not including such payment in the income of the recipient. Because alimony is often paid by the higher-earning party, this will often result in higher overall tax liability. These changes only apply to agreements executed after December 31, 2018 or executed on or before such date and modified after such date, provided that the modification expressly provides that the updated rules of the Act apply. These changes do not sunset after December 31, 2025.
- **Elimination of Certain Employee Exclusions and Deductions.** The exclusion for qualified moving expense reimbursement, as well as the qualified bicycle reimbursement, is eliminated. Notably, however, the exclusions for adoption assistance programs and dependent care programs are untouched.
- **No Further Limits on Exclusion of Gain From Sale of Principal Residence.** The Act does not change the rules regarding the exclusion of gain on the sale of a principal residence.
- **Investment Interest Expense Deduction.** The Act does not change the rules regarding the deductibility of investment interest expense.
- **Excess Business Losses Disallowed.** The Act disallows "excess business losses" (losses attributable to trades or businesses of a taxpayer other than a corporation in excess of a $250,000 threshold amount, or $500,000 for a joint return), and carries such losses forward as part of the taxpayer's net operating loss in subsequent taxable years. The passive activity loss rules must be applied before the excess business loss rules. For partnerships and S corporations, the limit on excess business losses is applied at the partner or shareholder level.

Investments of Individuals:

- **Deduction for Passthrough "Domestic Qualified Business Income."** The Act allows a taxpayer other than a corporation to deduct the lesser of (i) 20% of that taxpayer's share of any "domestic qualified business income" of a passthrough (e.g., a partnership, S corporation, or sole proprietorship) and (ii) the greater of (a) 50% of the domestic wages paid with respect to the trade or business and (b) the sum of 25% of such wages and 2.5% of the unadjusted basis of all qualified property used in such trade or business. The qualified property component means that a taxpayer may be able to claim the deduction even if the trade or business has few or no employees, if such business generates income using depreciable tangible assets. Assuming the full 20% deduction, the effective marginal rate is 29.6% in respect of such income for the highest earners. The deduction does not apply to income from certain services businesses (e.g., accounting, law, health, financial services, and other businesses for which the skill or reputation of the owner or employees is the principal asset), except in the case of individuals whose taxable income does not exceed $207,500 ($415,000 for joint returns). Also, qualified business income does not include investment-related income (other than certain dividends from REITs).
  - A noncorporate taxpayer is allowed the qualified business income deduction for qualified REIT dividends (REIT dividends other than capital gain dividends or dividends that qualify as qualified dividend income).
  - In an attempt to discourage aggressive use of this provision, the Act reduces the minimum understatement percentage before certain accuracy penalties apply.
  - The deduction is allowed in calculating "taxable income" but not in calculating "adjusted gross income." As discussed above, thresholds for certain deductions (e.g., medical expenses and casualty losses) are determined by reference to adjusted gross income rather than taxable income. Moreover, this may be significant for state and local income tax purposes.
  - The 3.8% Medicare tax on net investment income and the 3.8% FICA tax on net earnings from self-employment are both calculated without regard to the deduction.
- **Net Operating Losses.** Net operating losses arising after December 31, 2017 are deductible only to the extent of 80% of the taxpayer's taxable income, and can be carried forward indefinitely but generally cannot be carried back. Net operating losses that arose before January 1, 2018 will not be subject to the 80% limitation.
- **Application of Self-Employment Tax to Allocations of Passthrough Income.** The Act retains the prior rules on the application of self-employment tax to amounts received through a passthrough entity.
- **No Changes to Identification of Specified Securities.** The Act does not contain the provision in the Senate bill that would have required lots of specified securities purchased at different prices to be sold on a first-in first-out ("FIFO") basis.
- **Like-Kind Exchanges Limited to Real Property.** Deferral of gain on like-kind exchanges is only permitted with respect to real property. However, deferral of gain is still available for like-kind exchanges with respect to property other than real property if the property disposed of by the taxpayer is disposed of before January 1, 2018, or the property received by the taxpayer is received before January 1, 2018. This transition rule allows taxpayers to complete a deferred or reverse like-kind exchange that involves property other than real property. While this could result in gain recognition of a trade-in of a depreciated asset such as an aircraft, the gain may be offset by bonus depreciation if the aircraft is used in a trade or business. Moreover, deferral of loss is similarly restricted to like-kind exchanges with respect to real property, which could create a tax benefit for taxpayers engaging in "trade-ins" of assets that are worth less than their adjusted basis. This change does not sunset after December 31, 2025.
- **Self-Created Intangibles Not Capital Assets.** The Act excludes certain self-created intangibles (patents, inventions, models or designs, or secret formulas or processes) from the definition of a "capital asset" so that any gain or loss on the sale or exchange of such property will not receive

capital gain treatment. This provision does not apply to goodwill. This change does not sunset after December 31, 2025.

- **Controlled Foreign Corporation 30-Day Holding Period Eliminated.** The Act eliminates the requirement that a corporation must be controlled for an uninterrupted period of 30 days to be a controlled foreign corporation. This is particularly relevant for U.S. heirs who receive shares representing 10% or more of the vote or value of non-U.S. corporations from non-U.S. individual decedents.

- **Expanded Controlled Foreign Corporation Attribution Rules.** The Act expands the controlled foreign corporation attribution rules to include "downward attribution" from a foreign person to a related U.S. person. As a result, individual- and family-owned businesses may be controlled foreign corporations when they would not have been under prior law.

Miscellaneous:

- **Elimination of Individual Mandate.** The Act reduces to zero the individual shared responsibility payment imposed under the Affordable Care Act for failure to maintain essential health coverage (the "individual mandate"). This change does not sunset after December 31, 2025.
- **No Mandatory "Rothification" of Retirement Accounts.** The Act preserves the tax treatment of traditional defined contribution plans (e.g., 401(k)s), which allow the employee to invest pre-tax money (only subject to tax on withdrawal).
- **Non-Qualified Deferred Compensation.** The Act does not change the taxation of non-qualified deferred compensation. There were earlier proposals that would have effectively eliminated deferred compensation by replacing the current law treatment of deferred compensation with a new section that generally would have required income inclusion by the employee when the compensation vests (rather than when the compensation is paid), but these proposals were not included in the Act.

Questions regarding the Act may be directed to any member of the Tax Group or the Estates and Personal Group. Contact information is available on the final page of this memorandum.

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CONTACTS

New York		
James I. Black III	+1-212-558-3948	blackj@sullcrom.com
Ronald E. Creamer Jr.	+1-212-558-4665	creamerr@sullcrom.com
Charles T. Dowling	+1-212-558-3845	dowlingc@sullcrom.com
David P. Hariton	+1-212-558-4248	haritond@sullcrom.com
Jeffrey D. Hochberg	+1-212-558-3266	hochbergj@sullcrom.com
Donald L. Korb	+1-212-558-4822	korbd@sullcrom.com
Andrew S. Mason	+1-212-558-3759	masona@sullcrom.com
Andrew P. Solomon	+1-212-558-3783	solomona@sullcrom.com
David C. Spitzer	+1-212-558-4376	spitzerd@sullcrom.com
Zena M. Tamler	+1-212-558-1675	tamlerz@sullcrom.com
Davis J. Wang	+1-212-558-3113	wangd@sullcrom.com
S. Eric Wang	+1-212-558-3328	wangs@sullcrom.com
Isaac J. Wheeler	+1-212-558-7863	wheeleri@sullcrom.com
Basil P. Zirinis	+1-212-558-3848	zirinisb@sullcrom.com
David M. Simins	+1-212-558-3781	siminsd@sullcrom.com
London		
Ronald E. Creamer Jr.	+44-20-7959-8525	creamerr@sullcrom.com
S. Eric Wang	+44-20-7959-8411	wangs@sullcrom.com
Basil P. Zirinis	+44-20-7959-8585	zirinisb@sullcrom.com
Washington, D.C.		
Donald L. Korb	+1-202-956-7675	korbd@sullcrom.com

SULLIVAN & CROMWELL LLP

August 21, 2017

Administration Issues Executive Order Designed to Streamline Federal Environmental Permitting Reviews for Infrastructure Projects

Order Establishes a Two-Year Timeline for Processing Federal Environmental Reviews and a One Federal Decision Policy for Major Infrastructure Projects

SUMMARY

On August 15, the President issued an Executive Order Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects (the "Order")[1] with the intention of streamlining Federal environmental approval procedures that can delay infrastructure projects. Stakeholders and commentators have widely acknowledged that the approval process for large infrastructure projects can take up to 10 years or more, delaying essential U.S. infrastructure needs.[2] The Order builds on prior legislative and regulatory efforts to speed the approval of infrastructure projects[3] by establishing a goal of completing all Federal environmental reviews and authorization decisions for major infrastructure projects within two years. A "major infrastructure project"[4] is defined in the Order as a project to develop public or private assets providing services to the general public that requires multiple authorizations by Federal agencies and an environmental impact statement ("EIS")[5] under the National Environmental Policy Act ("NEPA").[6] In addition to the two-year timeline, the Order establishes a One Federal Decision policy that will require the designation of a lead Federal agency with responsibility for navigating each major infrastructure project through the Federal environmental review and authorization process and, where feasible, a single Record of Decision ("ROD") from each participating Federal agency. The Order directs all Federal agency authorization decisions for major infrastructure projects to be completed within 90 days following the issuance of all required ROD(s).

BACKGROUND

During the 2016 presidential campaign, both major party candidates argued that the United States suffered from major deficiencies in infrastructure, and both candidates advocated devoting substantial resources to enhancing the country's infrastructure.[7] Since the inauguration, various government agencies and members of the Administration have been studying the infrastructure challenges facing the United States in an attempt to develop viable policies to facilitate the prompt development of infrastructure projects and attract more private capital. Many stakeholders agree on the need for permitting reform at the Federal, state and local level to address increasing delays in the approval process.[8] NEPA, the primary statute governing environmental approvals at the Federal level, requires a detailed review of the environmental effects of a proposed project, and completing the process can often take several years.[9]

The NEPA process applies to projects involving major Federal action, such as the issuance of Federal permits or the provision of Federal financing. Environmental review under NEPA involves three increasingly rigorous levels of analysis: Categorical Exclusion ("CATEX") determination, Environmental Assessment ("EA"), and EIS.

Under existing law and regulation, a Federal action may be categorically excluded from a detailed environmental analysis if the Federal action does not "individually or cumulatively have a significant effect on the human environment."[10] If the Federal agency (or agencies, as several agencies can be involved) determines that no CATEX applies, the agency must then prepare an EA to determine whether or not the proposed action has the potential to cause significant environmental effects. The EA is a summary document providing evidence and analysis to determine whether the more rigorous EIS is necessary. If the EA indicates that an EIS is necessary, the agency is then required to conduct a highly detailed analysis of potential environmental impacts, reasonable alternatives to the project, mitigation measures, and whether the project complies with applicable laws and executive orders.

The EIS process begins when an agency publishes a notice of intent ("NOI") to publish the EIS in the Federal Register. A draft EIS is then published for a notice and comment period of a minimum of 45 days, which prompts agencies to consider all substantive comments and, if necessary, conduct further analyses before a final EIS is published.[11] The public comment process often involves multiple rounds of review and amendment of the draft EIS and offers project opponents opportunities to delay or modify the EIS and influence the project design. The Order aims to impose a time limit on this potentially lengthy EIS process.

THE EXECUTIVE ORDER

The Order provides for the following:

1. Section 4: Agency Performance Accountability

   a. **Performance Priority Goals** – The Order directs the Director of the Office of Management and Budget ("OMB"), in consultation with the Federal Permitting Improvement Steering Council ("FPISC"), to establish, within 180 days following the Order, a Cross-Agency Priority Goal on Infrastructure Permitting Modernization ("CAP Goal") to reduce the average time for completing Federal environmental reviews and authorizations to approximately two years following the date of the publication of a NOI, or other benchmark deemed appropriate by OMB.

      - The Order directs the OMB, within 180 days following the establishment of the CAP Goal, to issue guidance for establishing a performance accountability system to track each major infrastructure project, including

        - whether major infrastructure projects are processed using the One Federal Decision policy;
        - whether major infrastructure projects have a permitting timetable, and whether agencies are meeting the established milestones in such permitting timetable;
        - whether major infrastructure projects follow an effective process for elevating instances where permitting timetable milestones are, or are anticipated to be, missed or extended; and
        - the time and costs of processing the environmental reviews.

   b. **Accountability** – The Order requires that the accountability system include a scoring mechanism mandating that

      - the applicable agencies submit information to OMB and, at least once per quarter, OMB produce a scorecard of agency performance and overall progress toward achieving CAP Goal targets;
      - an agency submit an estimate of the cost of a delay to a project where an agency's inability to meet a permitting timetable milestone results in a significant delay; and
      - the OMB consider each agency's performance during budget formulation and determine whether appropriate penalties should be imposed for those agencies that fail to meet a permitting timetable milestone.

2. Section 5: Process Enhancements

   a. **Processing of Major Infrastructure Projects** – The Order instructs Federal agencies to use the One Federal Decision policy; to develop and follow a permitting table to be updated at least quarterly by participating agencies; and to employ an effective process to elevate and address issues when the permitting timetable is behind schedule.

   b. **One Federal Decision** – The Order requires that each major infrastructure project have a lead Federal agency that is responsible for navigating the project through the Federal environmental review and authorization process and coordinating one ROD among all participating Federal agencies.

- Following the issuance of an ROD, all Federal authorization decisions for the construction of a major infrastructure project must be completed within 90 days, barring extenuating circumstances.
- The lead Federal agency may extend the 90-day deadline if the agency determines that Federal law prohibits the agency from issuing its approval or permit within the 90-day period, the project sponsor requests that the permit or approval follow a different timeline, or the lead Federal agency determines that an extension would better promote completion of the project's environmental review and authorization process.
- The Council on Environmental Quality ("CEQ") and OMB are required to develop a framework for implementing the One Federal Decision policy, in consultation with FPISC.

c. **Dashboard** – The Order provides that all projects be tracked on the Permitting Dashboard established under the FAST Act, which tracks the status of Federal environmental reviews and authorizations for infrastructure projects.[12]

d. **Executive Order 13766** – The Order discusses the process for implementing the Executive Order Expediting Environmental Reviews and Approvals for High Priority Infrastructure Projects, dated January 24, 2017,[13] an earlier order signed by the President designed to expedite environmental review and approval of "high-priority" infrastructure projects.

e. **CEQ** – The Order requires that, within 30 days following the Order, the CEQ develop an initial list of actions it will take to enhance and modernize the Federal environmental review and authorization process.

f. **FPISC** – The Order directs that the FPISC Executive Director may, upon request of an FPISC member agency or a project sponsor, work with the lead agency or any cooperating and participating agencies to facilitate the environmental review and authorization process for any infrastructure project.

g. **Energy Corridors** – The Order names the Departments of the Interior and Agriculture, as appropriate, as the lead agencies for facilitating the identification and designation of energy right-of-way corridors on Federal lands.

h. **Department of the Interior** – The Order directs the Department of the Interior to provide to OMB a strategy and recommendation for a multi-agency reorganization effort.

CHANGE TO EXISTING FEDERAL CLIMATE CHANGE POLICY

Section 6 of the Order revokes Executive Order 13690 of January 30, 2015 ("Order 13690"), which updated Federal flood protection standards in recognition of the anticipated future effects of climate change with respect to rainfall patterns and rising sea levels.[14] Order 13690 was aimed at reducing new infrastructure projects' exposure to flooding by requiring that new public infrastructure projects meet specific criteria,[15] and the Order's stated rationale for the revocation was to reduce burdensome regulations. Supporters have praised the revocation for eliminating the more expensive building costs associated with Order 13690's more demanding flood standard,[16] while critics have expressed concerns about the increasing frequency of major flood events and their potential impact on the nation's infrastructure.[17]

POTENTIAL IMPACT

Although improving the efficiency of the Federal environmental permitting process is a desirable goal, it remains unclear how significant a practical effect the Order will have on accelerating approvals for major infrastructure projects. Efforts by previous administrations have had only limited success in reducing approval bottlenecks, and the Order lacks any enforcement mechanism other than a directive that failure to meet deadlines be taken into account when making budgetary decisions. That being said, increased involvement by OMB and the tracking and scoring of agency performance, together with the threat of budget cuts to underperforming agencies, may increase pressure on Federal agencies to reduce delays in the NEPA approval process. Ultimately, however, statutory revisions to NEPA and revisions to implementing regulations (as well as to state and local approval processes) would likely be required to significantly streamline the approval process for major infrastructure projects, and the prospects and timing of such significant reforms remain uncertain. Moreover, because of the sometimes complex web of state and local approval processes, achieving a streamlined Federal approval process will still leave in place myriad state and local permitting issues that may delay a particular project.

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ENDNOTES

1 *See* "Presidential Executive Order on Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure," August 15, 2017, *available at* https://www.whitehouse.gov/the-press-office/2017/08/15/presidential-executive-order-establishing-discipline-and-accountability.

2 *See, e.g.*, Federal Permitting Improvement Act of 2015, S.280, 114th Cong., *available at* https://www.congress.gov/bill/114th-congress/senate-bill/280?q=%7B%22search%22%3A%5B%22%5C%22federal+permitting+improvement+act%5C%22%22%5D%7D&r=1; Exec. Order No. 13604, "Executive Order — Improving Performance of Federal Permitting and Review of Infrastructure Projects" (March 22, 2012), *available at* https://obamawhitehouse.archives.gov/the-press-office/2012/03/22/executive-order-improving-performance-federal-permitting-and-review-infr; "Two Years, Not Ten Years: Redesigning Infrastructure Approvals," by Philip K. Howard, Common Good, September 2015, *available at* https://commongood.3cdn.net/c613b4cfda258a5fcb_e8m6b5t3x.pdf.

3 In reverse chronological order, the President's Executive Order Expediting Environmental Reviews and Approvals for High Priority Infrastructure Projects, dated January 24, 2017; the Fixing America's Surface Transportation Act of 2015 (FAST Act); the Moving Ahead for Progress in the 21st Century Act (MAP-21) in 2012; the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005; the Transportation Equity Act for the 21st Century (TEA-21) in 1998.

4 *See* Order, § 3(e).

5 For more information on the EIS process, see "National Environmental Policy Act Review Process – Environmental Impact Statement (EIS)," Environmental Protection Agency, last updated January 24, 2017, *available at* https://www.epa.gov/nepa/national-environmental-policy-act-review-process.

6 *See* National Environmental Policy Act, as amended, 42 U.S.C. § 4321 et seq., *available at* https://www.fsa.usda.gov/Internet/FSA_File/nepa_statute.pdf.

7 "What Trump, Clinton and Voters Agreed On: Better Infrastructure," by Emma G. Fitzsimmons, dated November 9, 2016, *available at* https://www.nytimes.com/2016/11/10/nyregion/what-trump-clinton-and-voters-agreed-on-better-infrastructure.html?mcubz=1.

8 *See, e.g.*, Howard, *supra* note 2.

9 For example, the most recent data available from the Federal Highway Administration, Fiscal Year 2011, found that, for the 23 transit projects for which an EIS was required, the median amount of time from the project's NOI to the ROD was 6.6 years. *See* "Estimated Time Required to Complete the NEPA Process," U.S. Department of Transportation Federal Highway Administration, *available at* https://www.environment.fhwa.dot.gov/strmlng/nepatime.asp.

10 40 CFR 1508.4, *available at* https://www.ecfr.gov/cgi-bin/text-idx?SID=6b8e629cbac80e3d59550a7e90b32058&mc=true&node=pt40.37.1508&rgn=div5#se40.37.1508_14.

11 *See* "National Environmental Policy Act Review Process — Environmental Impact Statement (EIS)," *available at* https://www.epa.gov/nepa/national-environmental-policy-act-review-process.

12 *See* "Permitting Dashboard," Federal Infrastructure Projects, *available at* https://www.permits.performance.gov/. For statutory authority, *see* 42 U.S.C. 4370m-2: Permitting process improvement, *available at* http://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title42-section4370m-2&num=0&edition=prelim.

ENDNOTES (CONTINUED)

13 *See* "Executive Order Expediting Environmental Reviews and Approvals for High Priority Infrastructure Projects," dated January 24, 2017, *available at* https://www.whitehouse.gov/the-press-office/2017/01/24/executive-order-expediting-environmental-reviews-and-approvals-high.

14 *See* "Executive Order – Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input," January 30, 2015, *available at* https://obamawhitehouse.archives.gov/the-press-office/2015/01/30/executive-order-establishing-federal-flood-risk-management-standard-and-.

15 The criteria included a requirement to use the best available climate change science and to construct projects to designated historic flood elevation standards.

16 *See, e.g.*, "Abraham praises repeal of Obama-era flood plain expansion plan," dated August 15, 2017, *available at* https://abraham.house.gov/media-center/press-releases/abraham-comments-flood-plain-expansion-repeal.

17 *See, e.g.*, "Curbelo: Executive Order Rolling Back Flood Risk Management Is Irresponsible, Would Waste Taxpayer Dollars," dated August 15, 2017, *available at* https://curbelo.house.gov/news/documentsingle.aspx?DocumentID=1655.

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CONTACTS

New York		
Werner F. Ahlers	+1-212-558-1623	ahlersw@sullcrom.com
Ronald E. Creamer Jr.	+1-212-558-4665	creamerr@sullcrom.com
Scott B. Crofton	+1-212-558-4682	croftons@sullcrom.com
Sergio J. Galvis	+1-212-558-4740	galviss@sullcrom.com
Christopher L. Mann	+1-212-558-4625	mannc@sullcrom.com
David C. Spitzer	+1-212-558-4376	spitzerd@sullcrom.com
Washington, D.C.		
Samuel R. Woodall III	+1-202-956-7584	woodalls@sullcrom.com
London		
Nikolaos G. Andronikos	+44-20-7959-8470	andronikosn@sullcrom.com
Ronald E. Creamer Jr.	+44-20-7959-8525	creamerr@sullcrom.com
Ben Perry	+44-20-7959-8477	perryb@sullcrom.com
Stewart M. Robertson	+44-20-7959-8555	robertsons@sullcrom.com
Paris		
Olivier de Vilmorin	+33-1-7304-5895	devilmorino@sullcrom.com

Hong Kong		
Garth W. Bray	+852-2826-8691	brayg@sullcrom.com
Jamieson J. Logie	+852-2826-8616	logiej@sullcrom.com
Chun Wei	+852-2826-8666	weic@sullcrom.com
Sydney		
Waldo D. Jones Jr.	+61-2-8227-6702	jonesw@sullcrom.com

SULLIVAN & CROMWELL LLP

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Federal Transportation Administration Proposes Procedures to Address Impediments to the Use of P3s and Private Investment in Transportation Projects

Federal Transportation Administration Proposes Procedures for Requesting Waivers or Modifications of Certain Regulatory Requirements to Increase Use of P3s and Private Investment in Transportation Projects

INTRODUCTION

On July 31, 2017, the United States Department of Transportation's Federal Transportation Administration (the "FTA") proposed a Private Investment Project Procedures rule (the "Proposed Rule") that would allow sponsors of public transportation capital projects benefiting from some form of Federal financial assistance to submit an application to the FTA requesting a modification or waiver of certain FTA regulations, practices or procedures that in the sponsors' view present impediments to the use of public-private partnerships ("P3s") or private investment in such projects.[1] The FTA defines a P3 as an agreement between a public agency and a private sector entity involving private sector investment and the sharing of risk between the agency and the private sector partner in the delivery, financing and operation of a project.

Comments on the Proposed Rule are due by September 29, 2017.

BACKGROUND

The Proposed Rule is consistent with a general trend in the U.S. Federal government over the past decade of developing a regulatory regime that is more conducive to the use of P3s and private investment in public transportation capital projects. In 2007, for instance, the U.S. Secretary of Transportation (the "Secretary") established "Penta-P," a pilot program to demonstrate the advantages and disadvantages of P3s for certain new fixed guideway (*i.e.*, rail, bus, rapid transit, ferry, etc.) projects. More recently, in December 2015, the Fixing America's Surface Transportation Act authorized an expedited project delivery program for capital investment projects, requiring that projects be supported, at least in part, by P3s. The FTA has tried to facilitate and streamline P3s and private sector participation by creating a Private Sector Participation Website, which provides technical support and other resources to project sponsors considering P3s, and by issuing guidance such as Circular 7050.1, which provides guidance on joint development between transit agencies and the private sector.

The FTA reported that, despite its efforts in this area, it has continued to receive comments from grant recipients and other stakeholders proposing, among other things, that

- FTA grant processes be further streamlined;
- Timing of grant awards be more compatible with the timing of financing and procurement schedules;
- Federal oversight be more flexible and dependent upon industry expertise; and
- The grant approval process rely more heavily on reviews by third parties with jurisdiction over a project to avoid duplicative reviews and expedite the process.

In light of these comments, and to address other barriers identified by the FTA, the FTA developed the Proposed Rule pursuant to a statutory mandate under Section 20013(b)(5) of the Moving Ahead for Progress in the 21st Century Act (MAP-21) to issue a rule to implement procedures and approaches to address impediments to the greater use of P3s and private investment.

The Proposed Rule is modeled after the Federal Highway Administration's ("FHWA") Special Experimental Project Number 15 ("SEP-15"), which created a procedure by which the FHWA may waive certain statutory and regulatory requirements related to, among other things, contracting, project finance, right-of-way acquisition and compliance with Federal environmental requirements on a case-by-case basis as a means of encouraging private investment, project management flexibility, innovation and efficiency in project implementation. For example, the Pennsylvania Department of Transportation applied for and received approval pursuant to SEP-15 to deviate from certain FHWA design-build regulations with respect to its P3 project to replace 558 bridges. The project reached financial close in March 2015. Similarly, the Idaho Transportation Department recently completed a program that added 120 miles to the state's highway system after receiving approvals under SEP-15 to deviate from existing regulations.

OVERVIEW OF THE PROPOSED RULE

The FTA has stated that it intends that the Proposed Rule will "encourage project sponsors to seek modifications of Federal requirements that will accelerate the project development process, attract private investment and lead to increased project management flexibility, more innovation, improved efficiency, and/or new revenue streams."[2]

The key elements of the Proposed Rule—eligibility requirements, the scope of waiver and modification, the application process, and the reporting requirement for successful applicants—are described below:

- ***Eligibility Requirements:***
  - The Proposed Rule applies to any recipient that is subject to 49 U.S.C. chapter 53 (governing public transportation) and funds an eligible public transportation capital project, at least in part, with Federal financial assistance under the Transportation Infrastructure Finance and Innovation Act ("TIFIA"),[3] the Railroad Rehabilitation and Improvement Financing ("RRIF") program[4] or any other Federal financial assistance program.
  - The Proposed Rule defines "recipient" as any entity that "proposes" to receive Federal financial assistance for an eligible project under the above-enumerated Federal financial assistance programs. An applicant need not have a commitment of Federal financial assistance at the time of application, but rather simply plan or be eligible to have such Federal financial assistance for its transportation project.[5]
  - An "eligible project" is defined as any surface transportation capital project that is subject to 49 U.S.C. chapter 53 and that will be implemented as a P3 or a joint development, or implemented with other private sector investment. The FTA defines "joint development" as a public transportation project that integrally relates to and often co-locates with commercial, residential, mixed-use or other non-transit development.[6]
- ***Scope of Waiver and Modification:***
  - A recipient may submit an application to modify or waive existing FTA requirements for an eligible project. "FTA requirements" is defined to include FTA regulations and mandatory provisions of practices, procedures or guidance documents, including circulars.
  - The Proposed Rule explicitly limits the FTA from waiving or modifying any requirement under 49 U.S.C. 5333 (relating to labor standards), the National Environmental Policy Act of 1969 or any other provision of any Federal statute.[7]
- ***Application Process:***
  - Only one application per project may be submitted. Applications must (i) describe the project's anticipated scope, cost, schedule, and expected source and amount of Federal financial assistance; (ii) identify whether the project is to be delivered as a P3 or a joint development, or with other private sector investment; (iii) provide a detailed explanation of the role of the private sector investor, if any, in delivering the project; (iv) identify the specific FTA requirement(s) that the recipient requests to have modified or waived and a proposal as to how such requirement(s) should be modified; (v) provide a justification for the waiver or modification, including an explanation of how the FTA requirement presents an impediment to a P3, joint development or other private sector investment; (vi) explain how the public interest and public investment in the project will be protected and how the FTA can ensure the appropriate level of public oversight and control is undertaken if the modification or waiver is allowed; (vii) where the project has more than one recipient, provide evidence of such other recipients' concurrence with submission of the application and waiver of the right to submit a separate application for the same project; (viii) provide a financial plan identifying sources and uses of funds committed to the project; and (ix) explain the expected benefits that the requested modification or waiver would provide to address impediments to the greater use of P3s and private investment.[8]

- The FTA is specifically seeking comment from industry stakeholders "on whether requiring evidence of committed financing would be premature at the time of application" for certain projects.
- Properly submitted applications will be reviewed by the FTA. The Administrator of the FTA may modify or waive FTA requirements if it determines that the recipient has demonstrated that (i) the FTA requirement proposed for modification discourages the use of P3s, joint development or other private sector investment; (ii) the proposed modification or waiver is likely to have the effect of encouraging the use of P3s, joint development or other private sector investment; (iii) the amount of private sector participation or risk transfer proposed is sufficient to warrant the requested modification or waiver; and (iv) modification or waiver of the FTA requirements can be accomplished while protecting the public interest and any public investment.[9]

- ***Reporting Requirement for Successful Applicants:***
  - The recipient of a modification or waiver of FTA requirements pursuant to the Proposed Rule must submit a report that evaluates the effect of the modification or waiver on the delivery of the project within one year after the project's completion. Specifically, the report must evaluate the success or failure of the modification or waiver as well as the extent to which such modification or waiver addressed impediments to the greater use of P3s and private investment.[10]

CONCLUSION

Overall, the Proposed Rule is consistent with the current Administration's focus on "unleash[ing] the potential for private investment"[11] in transportation works and developing America's infrastructure, which the Secretary has hailed as "a key factor in productivity and economic growth, which has . . . provided our country with unprecedented mobility, safety and security."[12] The Proposed Rule, if adopted, would in principle allow for greater use of P3s and private investment by eliminating or curbing certain regulatory impediments to obtaining FTA grants and approvals, but it remains to be seen whether industry stakeholders will consider the Proposed Rule to be an adequate solution to the perceived barriers to private participation in public projects. For instance, although the FTA intends the Proposed Rule to be used as a tool to streamline and accelerate project development processes, the proposal notably fails to establish a deadline by which the FTA must approve or deny an application for a modification or waiver.[13]

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ENDNOTES

[1] *See* 82 Fed. Reg. 35,500 (July 31, 2017).

[2] *Id.* at 35,503.

[3] 23 U.S.C. §§ 181–89, 601–09. TIFIA provides Federal credit assistance in the form of direct loans, loan guarantees and standby lines of credit.

[4] 45 U.S.C. §§ 821–23. RRIF provides Federal credit assistance in the form of direct loans and loan guarantees.

[5] The proposed release states that the FTA Administrator's consideration of an application under this part does not commit Federal-aid funding for the project. *See* 82 Fed. Reg. at 35,505.

[6] *See id*. and U.S. Dep't of Transp., Fed. Transit Admin., Circular 7050.1, Federal Transit Administration Guidance on Joint Development (Aug. 25, 2014).

[7] 82 Fed. Reg. at 35,505.

[8] *Id.*

[9] *Id.* at 35,503, 35,505.

[10] *Id*. at 35,505–06.

[11] Bart Jansen, *Chao Outlines Transportation Priorities from Skies to Roads*, USA TODAY, Jan. 11, 2017, https://www.usatoday.com/story/news/2017/01/11/elaine-chao-transportation-nominee/96436210/.

[12] Sean Hackbarth, *Secretary Chao Outlines Trump's Infrastructure Vision*, U.S. CHAMBER OF COMMERCE, May 16, 2017, https://www.uschamber.com/above-the-fold/secretary-chao-outlines-trumps-infrastructure-vision.

[13] *See* 82 Fed. Reg. at 35,506.

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CONTACTS

New York		
Werner F. Ahlers	+1-212-558-1623	ahlersw@sullcrom.com
Ronald E. Creamer, Jr.	+1-212-558-4665	creamerr@sullcrom.com
Scott B. Crofton	+1-212-558-4682	croftons@sullcrom.com
Sergio J. Galvis	+1-212-558-4740	galviss@sullcrom.com
Christopher L. Mann	+1-212-558-4625	mannc@sullcrom.com
David C. Spitzer	+1-212-558-4376	spitzerd@sullcrom.com
Washington, D.C.		
Samuel R. Woodall III	+1-202-956-7584	woodalls@sullcrom.com
London		
Nikolaos G. Andronikos	+44-20-7959-8470	andronikosn@sullcrom.com
Ronald E. Creamer, Jr.	+1-212-558-4665	creamerr@sullcrom.com
Ben Perry	+44-20-7959-8477	perryb@sullcrom.com
Stewart M. Robertson	+44-20-7959-8555	robertsons@sullcrom.com
Paris		
Olivier de Vilmorin	+33-1-7304-5895	devilmorino@sullcrom.com
Hong Kong		
Garth W. Bray	+852-2826-8691	brayg@sullcrom.com
Jamieson J. Logie	+852-2826-8616	logiej@sullcrom.com
Chun Wei	+852-2826-8666	weic@sullcrom.com

Sydney

Waldo D. Jones, Jr.	+61-2-8227-6702	jonesw@sullcrom.com

Dear friends,

As you know, the White House issued its *Legislative Outline for Rebuilding Infrastructure in America* and a Fact Sheet Summary of the Outline this morning. This follows by several weeks the release of a document that purported to be a leaked draft of the Administration's infrastructure principles, about which I wrote an article that was published this weekend.

A quick review of the factsheet summary and the Outline suggests that much of what was in the leaked document made it into the Outline, and that at least two of the themes I suggested in my article were missing from the leaked document, permitting reform and expansion of the Airport Privatization Pilot Program, play a prominent role in the Outline.

Although we are still analyzing the Outline, which runs to over 50 pages, and will have more to say later, the Outline contains much good news in the way of significant reforms. Commentators over the last few months have criticized the Administration's telegraphed spending plans, consisting of $200 billion to be leveraged by state, city and private funding to get to the $1.5 trillion aggregate figure. Of course, the threshold question has been where the $200 billion will come from in the first place. These are all fair criticisms and can be debated.

That being said, the reforms in the Outline are the more important aspect of the proposal. Digging into the policy details yields a lot of encouraging material. Frankly, the Outline contains many of the themes that we have been urging over the last year in our work with key stakeholders such as you. The headline dollar figures in the document will attract criticism, no doubt, but there is much here for the private sector to work with if these reforms can be moved forward. For me personally, this glass is at least half full.

We will analyze in greater detail and send thoughts, but in short, the Outline –

- Has four parts –
  - Funding and financing infrastructure improvements;
  - Additional provisions for infrastructure improvements (in transportation, water, veterans affairs and land revitalization);
  - Permitting reform; and
  - Workforce development
- Funding and financing infrastructure improvements
  - Infrastructure incentives program – this is $100 billion for the much-discussed leveraged spending program, allocated to the Department of Transportation, US Army Corps of Engineers and the Environmental Protection Agency, with each administering grants (as opposed to loans or loan guarantees) of up to 20% of a project's cost, with the rest provided by states, cities and private investors and operators
  - Rural infrastructure program – $50 billion for capital investments in rural investments, 80% of that to state to governors for further allocation
  - Transformative projects program – $20 billion, administered by Department of Commerce, both funding and technical assistance for bold and innovative ideas and projects
  - Expansion of existing programs – $20 billion to expand TIFIA, RRIF, WIFIA, PABs (including importantly allowing tax-exempt financing to stay in place even when control

of an infrastructure asset is transferred to a private owner or operator), Department of Agriculture Rural Utilities Service lending programs funding
    - Public lands infrastructure – Creation of an Interior Maintenance Fund to be overseen by the Treasury Department, funded by receipts from use of Federal lands
    - Disposition of federal property to states, cities and private operators, including potentially among others, Reagan and Dulles airports, George Washington and Baltimore Washington Parkways, TVA transmission assets and Bonneville Power Administration's transmission assets
    - Federal capital financing fund – Reforms to budget scoring to align more with capital budgeting, as a private business would do
- Additional provisions for infrastructure improvements (in transportation, water, veterans affairs and land revitalization)
    - Transportation – Provide states flexibility to toll interstates and invest in infrastructure, and numerous other provisions designed to provide financing opportunities
    - Airport Privatization Pilot Program – Reduction of the 65% carrier vote to majority vote and elimination of the cap on the number of airports that can participate; I would like to see a broader definition of what constitutes "on airport" spending, but that is not mentioned
    - Water – Financing reforms for water projects and a number of other reforms
    - Lots more to unpack on veterans affairs and land revitalization
- Permitting reform
    - One agency, one decision environmental review; reducing inefficiencies in environmental review; and other specific reforms
    - Delegation to states – Expand DOT NEPA delegation to other agencies; allow states to assume FHWA responsibilities for approval of rights of way acquisitions
    - Pilot programs for permitting reform
    - Judicial reform – Limit injunctive relief to exceptional circumstances, revised statute of limitations for Federal infrastructure permits or decisions to 150 days (down from 6 years)
- Workforce development
    - Expand Pell Grant eligibility to high-quality, short-term programs, reform career and technical education, strengthen ties to Federal Work Study program for apprenticeship and similar training programs, and reform licensing requirements for persons seeking a job on an infrastructure project

We look forward to exploring many of these proposals in greater detail with you.

Chris

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Christopher L. Mann
Sullivan & Cromwell LLP
125 Broad Street
New York, NY 10004
USA
+1 212 558 4625 (voice)
+1 212 291 9092 (fax)
mannc@sullcrom.com
www.sullcrom.com

Dear friends,

Further to the February 12 flash analysis of the White House's *Legislative Outline for Rebuilding Infrastructure in America* issued that day, I am pleased to send this flash analysis of the *Senate Democrats' Jobs & Infrastructure Plan for America's Workers* issued yesterday morning, March 7, by a group of eight senior Senate Democrats, led by Senate Majority Leader Charles Schumer (D-NY).

The Senate Democrats' proposal takes a starkly contrasting approach compared to the White House's proposal, with almost no specific references to private infrastructure investment. It is a $1 trillion Federal spending package, funded largely by rolling back several key elements of the 2017 tax reform. Because the Senate Democrats' proposal, like the Administration's proposal, would require the support of at least 60 Senators to enact, it is difficult to assess the significance of this proposal. Notably, the Senate Democrats' proposal does not make reference to the Administration's proposal, ignoring it entirely. This approach would seem to foretell a process whereby the Administration and the Senate Democrats have proposed two completely different approaches to solving the nation's infrastructure program, making compromise difficult.

There is one similarity, and that lies in the Administration's proposed $200 billion spending package, which includes (as described in further detail in my below February 12 email) $100 billion in Federal grants to incentivize state, local and private infrastructure; $50 billion for rural infrastructure including rural broadband; $20 billion for transformative projects; and $20 billion for expansion of TIFIA, WIFIA and RRIF. At a high level, these proposals are similar to the Senate Democrats' much larger proposal in that they entail a significant amount of Federal funding directly to state and local governments for development of infrastructure (except that the Administration's proposed $100 billion was to be made available on an equal basis for private infrastructure projects), but philosophically the approach is very different. The second half of the Administration's Outline, the various proposals regarding permitting reform and privatizations of Federal assets and airports, and other proposals tending to foster private infrastructure, are completely absent from the Senate Democrats' proposal. The Senate Democrats' proposal focuses on Federal direct spending and on Federal funding provided to states and cities for them to spend on infrastructure, with almost no emphasis on the role of the private sector in developing infrastructure.

Moving on to describe the Senate Democrats' proposal specifically:

The Senate Democrats' proposal entails a $1 trillion spending package, proposed to be funded with the proceeds of the reversal of three elements of the 2017 tax reform:

- returning the top marginal rate for individual income taxation to 39.6%;
- restoring the alternative minimum tax to the 2017 levels; and
- restoring the 2017 parameters to the estate tax.

The Senate Democrats estimate that these three reversals would fund $651 billion of the expenditure over a 10-year period. In addition, they propose to tax carried interest (to raise $12 billion over 10 years) and to bring the corporate tax rate to 25% from the 2018 rate of 21% ($359 billion over 10 years), for a total of $1.022 trillion over 10 years.

The Federal expenditures in the proposed plan are in the following 19 categories:

- $140 billion on roads and bridges, consisting of
    - $100 billion of additional funding for Federal-aid highways and Federal and tribal owned lands, and
    - $40 billion for critical bridge repair;
    - these include funding of the Disadvantaged Business Enterprise program and to aid the Territorial and Puerto Rico highways program; it is not clear whether any of this funding could be devoted to projects built or rehabilitated by private operators or by using private-sector funding;
- $10 billion to triple the TIGER grant program to aid states and localities to make multi-modal transportation investments, with set-asides for rural projects and requirements for geographical distribution;
- $115 billion on water and sewer systems, consisting of
    - $46 billion in drinking water programs and an equal amount for wastewater programs, in each case run by the US Environmental Protection Agency, with priority on disadvantaged communities (Flint, Michigan is mentioned as an example) and Indian Tribes, and eliminating the local matching funding required of states and local governments for all such new funding; and
    - $23 billion for water infrastructure through the US Department of Agriculture Rural Development Water and Waste Water Grant Program, focused on small towns and rural communities under 10,000 in population;
- $115 billion on public transportation, consisting of
    - $15 billion on critical asset repair for large-scale projects;
    - $30 billion to replace outdated buses and rail cars;
    - $35 billion on core transit formula programs, meaning the Urbanized Area and State of Good Repair formula grants;
    - $10 billion on rural, tribal, seniors and persons with disabilities formula investments; and
    - $25 billion to expand the "New Starts, Small Starts, Core Capacity projects for subway, light rail, commuter rail, streetcar and bus rapid transit projects
- $50 billion on rail infrastructure, consisting of
    - $20 billion on Amtrak, including the Northeast Corridor and the National Network;
    - $15 billion on the Consolidated Rail Infrastructure and Safety Improvements program;
    - $10 billion on a Federal-state partnership program to reduce the state of good repair backlog on publicly owned and Amtrak infrastructure; and
    - $5 billion on intercity passenger rail

- $40 billion for megaprojects in a new program called Vital Infrastructure Program, targeted for projects with a capital cost of $500 million or more in urban areas and $100 million or more in rural areas, divided between freight and passenger projects
- $30 billion for metropolitan areas, including
    - $3 billion increase for the Transportation Alternative Program for smaller-scale transportation projects;
    - $16 billion for transportation performance incentive funds;
    - $3 billion for charging and refueling infrastructure; and
    - $8 billion for the Economic Development Administration at the US Department of Commerce's Public Works Program
- $62 billion for neighborhood revitalization, lead remediation and affordable housing, with a focus on Federal support of locally driven initiatives and including grants through the HOME Investment Partnerships Program and the Housing Trust Fund, and other funding programs
- $50 billion on schools, including
    - $40 billion on public schools, including Bureau of Indian Education funded schools and
    - $10 billion on community colleges (including tribal colleges)
- $30 billion on ports and waterways, including
    - $5 billion on multi-modal port and freight network projects through grants and loans, including, as in the White House proposal, making it easier for port projects to access RRIF and TIFIA; and
    - $25 billion to the US Corps of Engineers, requiring each Corps district to develop a five-year plan and to double both current project and program limits for the Corps' Continuing Authorities program (raising the cap for each program to $20 million from $10 million)
- $40 billion on airports and airspace, including
    - more funding (in an unspecified amount) for the Airport Improvement Program;
    - a new grant program to fund terminal construction and improvements, landside projects and security screening; and
    - modernization of FAA facilities and to accelerate NextGen deployment
- $25 billion on climate change measures, including three new programs:
    - new grant program called PROTECT, for resilient infrastructure;
    - new revolving loan fund; and
    - new oceans and coastal security fund
- $80 billion on the energy grid, for modernization, resilience and cybersecurity, and including Federal power upgrades (including TVA and Bonneville); and
    - Consolidating all renewable energy tax incentives into three new provisions with simpler incentives:
        - a technology-neutral tax credit for clean electricity (production tax credit of up to 2.3 cents per kwH or investment tax credit of up to 30%);

        - incentives for energy conservation; and
        - incentives for clean transportation fuel, consisting of a technology-neutral tax credit of up to $1 per gallon
- $40 billion for universal high-speed internet
- $15 billion on public lands, including national parks, forests, wildlife refuges and monuments, consisting of
    - $5 billion for highest priority deferred maintenance needs at the National Park Service;
    - $2 billion for deferred maintenance needs at the US Forest Service;
    - $1 billion for deferred maintenance needs at the Fish and Wildlife Service, Bureau of Land Management, Bureau of Reclamation and other Department of the Interior agencies;
    - $2.5 billion to the US Forest Service for fuels reduction and forest restoration treatments ($1.5 billion on Federal lands and $1 billion through grants to states);
    - $4 billion for the Land and Water Conservation Fund (split evenly between Federal projects and grants to states); and
    - $500 million for historic preservation needs, including grants to restore properties at Historically Black Colleges and Universities
- Over $10 billion for tribal infrastructure, including
    - $7.5 billion to the Health Care Facilities Construction program;
    - $2.5 billion for water infrastructure for Indian Country; and
    - $500 million on deferred maintenance needs of the Bureau of Indian Affairs
- $10 billion for Veterans' Affairs, including
    - $8.5 billion on hospitals and clinics;
    - $1 billion on domestic military infrastructure, including National Guard and Reserve Centers;
    - $500 million on grants to states for extended care facilities
- $20 billion in financing innovations to allow state and local governments to reduce financing costs and to attract additional investment, including
    - an Infrastructure Funding Authority (which appears to function like an infrastructure bank) to finance projects and to incentivize private investment, with an assurance that some funds will be spent in rural areas; although initial funding (in an unspecified amount) would be provided by "the government" (presumably the Federal government), it would be self-sustaining over time (with no explanation of how this would be designed to occur); this would include an Office of Technical & Rural Assistance; the Authority would have a non-partisan board and the Authority would be designed to operate free of political influence;
    - an expansion of RRIF, TIFIA and WIFIA, without an explanation of how they would be expanded or in what magnitude; and
    - an elimination of "arbitrary tax barriers for infrastructure projects that benefit the public" (this may be a proposal, like the White House Legislative Outline, to allow tax-exempt debt to remain outstanding when infrastructure

    is developed, maintained or operated by the private sector for public use) and a "new direct-pay bond program" to facilitate pension funds and other large investors to invest in infrastructure (neither of these proposals contains any detail or further explanation)
- $140 billion on the Highway Trust Fund, consisting of
    - funding for the Highway Account and the Mass Transit Account, designed to ensure their solvency until at least 2017; and
    - bipartisan exploration of solutions beyond the next decade (without any discussion of possible solutions)

The above proposals add up to $1.022 trillion, equal to the amount raised by the revenue-raising measures. In addition, the Senate Democrats proposed other provisions, with no expenditure figures given:

- Expanded Buy America requirements by applying them to all Federally supported infrastructure investment, including public-private partnerships that receive any Federal support; in addition:
    - expand the scope of Buy America materials beyond iron, steel and some manufactured products to include non-ferrous metals, plastic and polymer-based products, concretes and other aggregates, glass, lumber and drywall;
    - require public disclosure of all Buy America waivers and support development of US industries in those sectors (apparently through a Small Business Administration loan preference);
    - minimize waivers for iron and steel and establish new standards for other construction materials; and
    - assist states' own Buy America efforts
- Jobs programs, including
    - requiring that at least 14% of workers hired to work on Federally funded infrastructure projects be people with disabilities (consistent with current Federal hiring practices), and other unspecified diversity requirements;
    - disclosure requirements regarding prior labor violations for those companies applying to work on Federally funded infrastructure projects;
    - provisions designed to ensure worker choice between joining a labor union and not joining;
    - prevailing wage programs as in existing Federal policy;
    - encouraging agencies executing Federally funded infrastructure projects to consider the use of project labor agreements;
    - banning pre-dispute arbitration agreements or non-disclosure agreements for employers receiving Federal funding;
    - education and training opportunities for infrastructure-related jobs; and
    - workforce training programs
- Small business provisions, including

    - requiring all agencies spending funds on infrastructure to spend at least 33% of such funds are spent on small businesses and that 33% of all work going to large businesses be subcontracted to small businesses; and
    - authorizing the Small Business Administration to increase the ceiling on small businesses obtaining surety bonds to $10 million and indexing that ceiling to inflation
- Minority-, women- and veteran-owned business provisions (without any detail)
- Smart transportation policies, including
    - incentivizing new safety technologies;
    - strengthening enforcement efforts on unsafe driving;
    - enhancing vehicle safety standards;
    - unspecified steps to ensure safety rules are not loosened;
    - provisions relating to highway and pedestrian safety; and
    - improved monitoring of public transportation and rail safety
- Reducing waste, including
    - funding for the Government Accountability Office and agency Inspectors General

We hope this is helpful. It is difficult at this time to forecast next steps on Capitol Hill, but we look forward to discussing both proposals with you.

Best regards,

Chris

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Christopher L. Mann
Sullivan & Cromwell LLP
125 Broad Street
New York, NY 10004
USA
+1 212 558 4625 (voice)
+1 212 291 9092 (fax)
mannc@sullcrom.com
www.sullcrom.com

OPINION: INFRASTRUCTURE IN THE US – OPEN FOR BUSINESS?

10 February 2018 | 12:50GMT

The Trump administration has talked big about its plans to encourage investment in US infrastructure. Christopher Mann examines whether what has been revealed of the Trump infra plan so far goes far enough.

Despite being the largest economy in the world and having vast wealth at its disposal, the United States is regularly given low marks for infrastructure when compared with other developed countries. It seems unlikely, but the so-called infrastructure gap seen in so many countries is often most striking in the US. With the much-heralded Trump Infrastructure Plan due to be released next week, members of the Global Infrastructure Investor Association (GIIA), the body that represents the leading infra investors in the world, are watching with interest.

Notwithstanding the US's reputation as a free market-oriented economy, there has historically been relatively little private ownership or operation of US infrastructure (other than in energy and telecommunications). Instead, infrastructure has largely been in the hands of states, municipalities and public infrastructure authorities, which built much of the country's infrastructure in the 1960s and 1970s. Because many governmental authorities lack the political support to charge users what the infrastructure costs to build and maintain, and because they often lack construction and operational expertise, they have tended to underinvest in infrastructure.

There is bipartisan agreement that the US infrastructure needs can no longer be ignored. A document was leaked in January that purported to be a draft of the Trump Administration's statement of principles regarding a reform package to encourage new investment in infrastructure.

That draft contained a number of elements of the reforms that have been discussed since the Presidential election and provides at least the kernel of a number of key reforms. That being said, much was missing from the draft, including a statement of the overall magnitude of the Federal spending package that the Administration hopes to leverage to encourage state, municipal and private expenditure. The overall US spending level referred to in the President's State of the Union address last month was USD 1.5trn. If the Administration's frequent references to USD 200bn as the size of the overall Federal infrastructure spending package are coupled with the USD 1.5trn aggregate figure, it implies total state, municipal and private expenditure of USD 1.3 trn, a very tall order. There also have been statements that cuts from existing Federal infrastructure programs would pay for the new Federal spending. So the overall Federal and other spending levels, and the sources of revenue, remain important open questions. But overall, the draft appears to be an encouraging start.

GIIA members - pension funds, sovereign wealth funds and infrastructure funds - are looking for opportunities to deploy large sums of capital in the development, refurbishment, expansion and operation of infrastructure. Investors perceive US infrastructure assets as relatively safe investments, in some cases with revenues that mimic real GDP growth or inflation trends. Those features make infrastructure particularly attractive to pension funds and sovereign wealth funds, who are looking for assets whose growth and risk profile are well aligned with these funds' liabilities. With the right reforms to make it easier for such investors to find attractive assets, the private sector, while not providing a panacea, could provide a significant amount of the needed infrastructure investment. Six examples of potential reforms, some of which the leaked draft appears to contemplate, follow.

First, federal subsidies could be used to incentivize states, municipalities and the private sector to build infrastructure, or to transfer control of existing infrastructure through the grant of long-term concessions to private developers, operators and investors for value, making available to states and municipalities capital to build other infrastructure (so-called asset recycling, as practiced in Australia). The leaked document and public pronouncements by the Administration suggest that although the Federal government may provide a subsidy for worthwhile projects, it is not going to go out of its way to encourage such private investment over state and municipal investment, treating all such expenditure the same for purposes of receiving Federal subsidies. What will be more important in the Federal subsidy approval process is how much leverage any project applying for Federal subsidies will be able to achieve. In simpler terms, how many dollars of state, municipal or private investment in a particular project will each dollar of Federal subsidy granted to that project generate?

Second, the leaked document appears to suggest that the Administration will be expanding the availability of tax-exempt private activity bonds. Expanding the scope of PABs would incentivize private investment by reducing the cost of capital. Relatedly, the Administration could propose tax legislation to allow existing tax-exempt financing to remain in place, subject to the contractual terms of the bonds themselves, even if the public entity puts an existing asset financed by such debt in the hands of a private operator, in order to save the huge transaction costs associated with refinancing one type of tax-exempt financing with another. This appears to be under consideration by the Administration.

Third, the Federal government could facilitate private retail investment in infrastructure assets by creating an infrastructure investment trust regime similar to existing real estate investment trusts (REITs), the tax-advantaged vehicles that allow individuals to invest in the US real estate market.

Fourth, infrastructure investments could be excluded from the scope of the Foreign Investment in Real Property Tax Act (FIRPTA), which would eliminate the withholding tax on dispositions by foreign investors in any infrastructure assets that currently attract withholding under the law. This is currently a disincentive for some foreign investors to invest in certain types of US infrastructure assets.

Fifth, the Airport Privatization Pilot Program could be expanded to generate access to private capital for airport improvement and development. A number of features of the APPP restrict the attractiveness of the program, including a limit on the number of major airports that can be privatized, as well as a number of hurdles with regard to obtaining airline approval and spending proceeds on any development other than at the airport. The leaked document did not mention any reform along these lines, but many commentators and investors feel that this is among the lowest-hanging fruit in the US infrastructure space, since there are numerous examples of highly successful private operation of airports around the world.

Finally, a significant barrier to investment in infrastructure is the many layers of overlapping governmental agency oversight and the attendant delays associated with having a project reviewed by multiple agencies even within the Federal government. Streamlining the permitting process for infrastructure projects could significantly reduce the regulatory burden and encourage investment. The Administration has talked about such reforms, but there was little evidence in the leaked document that this is a focus, unless permitting reform will be rolled out separately.

The leaked document is only an indication, and perhaps an unreliable one at that, of the shape that the Administration's proposal may take. The Congressional legislative process is a road with many twists and turns, so it is hard to predict whether the US will manage to adopt a viable infrastructure policy, much less what the shape of that policy may be. What is clear is that the United States is in desperate need of significant infrastructure investment, and with the right reforms and incentives, private investors and operators, including in particular those from outside the US, can play a key role in providing much of this needed investment

Christopher L. Mann is a partner and coordinator of the infrastructure practice at Sullivan & Cromwell LLP, an international law firm based in New York City. The views expressed are his own and not that of his firm or its clients. The firm is a member of the Global Infrastructure Investor Association.

BROOKINGS

Up Front

How the new tax bill will cut infrastructure investment

Aaron Klein Tuesday, December 26, 2017

By increasing the cost to finance infrastructure for states and local governments, the recently enacted Tax Cuts and Jobs Act (TCJA) will lower investment in our nation's infrastructure. This runs counter to President Trump's repeated desire to tackle the major problems associated with America's crumbling infrastructure through increased investment. The impact may be large and immediate enough to swamp the short-term impact of any infrastructure package Congress can put together in the immediate future.

In America, most investment in infrastructure—about 3 out of every 4 dollars for operating, maintaining, and improving infrastructure—occurs at the state and local level. States, local governments, and infrastructure providers (port authorities, transit agencies, etc…) own over 90% of non-defense public infrastructure assets. They fund and finance infrastructure through a combination of taxes, borrowing, and user and beneficiary charges.

Big picture: The tax cuts will make infrastructure financing more expensive for states and local governments and increase the costs to local voters of funding infrastructure through property taxes. Here's how that will happen:

The largest immediate impact on the cost of financing infrastructure will come from increasing the cost for states to borrow through municipal debt. On a basic level, states and local governments borrow by issuing municipal debt "munis" that enjoy special status of paying interest that is not subject to federal taxes (and often not subject to the state's income tax, as well). The muni debt market is huge—about $3.8 trillion. Most infrastructure projects, particularly significant ones, involve issuing muni-debt to finance the costs. After all, a bridge needs to be built before it can collect any tolls.

The tax cuts will cause muni debt to be more expensive for states and local governments through several mechanisms. Many muni buyers are wealthy individuals, particular retirees. When the top marginal tax rate is cut, the value of debt being tax-free falls. This decline in value from cutting taxes for the top marginal rates will ripple through and make the bonds worth less. This means that new tax-free municipal debt will have to pay higher interest rates to attract capital. Higher interest costs for infrastructure agencies means less money available to build, repair, and upgrade infrastructure.

A second whammy for the muni-market will come from the corporate rate cut. Many muni debt buyers are corporations, particularly banks and insurance companies. The Federal Reserve estimates that banks and insurance companies together own almost 30 percent of all municipal debt. The same principle that applies to retail investors applies to corporate owners: When the marginal tax rate falls, the value of being 'tax-exempt' falls. With larger cuts on the corporate side from 35 to 21 percent, demand for munis from businesses, particularly banks and insurance companies, should fall even sharper.

Another negative impact from the tax bill on infrastructure funding comes from its treatment of local property taxes. Smart infrastructure projects increase property value. Basic and more innovative approaches to fund infrastructure have tried to capture that increase in value as a source of to pay for infrastructure. This can take the form of broad increases in property taxes or special property tax rate districts, but the principal is the same: property taxes are increased to pay for infrastructure.

The tax bill limits the amount of property taxes that can be deducted against federal income tax through what is often called the SALT deduction. This deduction is particularly binding on states with higher income taxes (often states in the northeast), which have some of the oldest and most decaying infrastructure. SALT deductions are also more likely to hit cities that have their own local income and property taxes and larger infrastructure needs. Limiting the SALT deduction will increase the cost of property taxes to voters, who ultimately have control over whether state and local governments go forward with new infrastructure projects.

To be fair, some of this impact will be mitigated by the various carve-outs in the legislation for businesses, particularly real estate businesses that allow them to continue to deduct state and local taxes. But the overall impact of limiting SALT deductions will be to increase costs to citizens who fund infrastructure through property taxes.

The tax bill will serve to increase the cost of infrastructure projects, slowing down the investments that President Trump says he wants more of. It will have the opposite impact of the Build America Bond program, enacted in the first year of the Obama Administration, which lowered the cost of municipal debt and helped stimulate greater investment in infrastructure.

Decreasing investment in infrastructure is the wrong way to try to increase our nation's long-term economic growth. Perhaps future infrastructure policy will counteract some of these impacts, but financial markets work quickly and the impact of the tax bill, at least in the short run, will be to make infrastructure more expensive again.

SESSION 4:
THE IMPACT OF BLOCKCHAIN TECHNOLOGY ON FINANCIAL INFRASTRUCTURE

Wharton
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ALTERNATIVE INVESTMENTS
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SESSION 5:
CASE STUDY: PUERTO RICO

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BROOKINGS

Up Front

What everyone got wrong about the Jones Act, hurricane relief, and Puerto Rico

Aaron Klein Wednesday, October 25, 2017

In mid-October, a month after Hurricane Maria, most of Puerto Rico remains without electricity or safe drinking water, and still has serious food shortages, due to a combination of insufficient disaster response from the federal government and the sheer magnitude of the storm. Unfortunately, too much of the discussion about how to help Puerto Rico recover was focused on whether to waive the Jones Act, which became a strange *cause célèbre* and social media favorite among critics of the President's response to the hurricane. The mistaken view that a temporary waiver of the Jones Act, which did occur, was based on an incomplete understanding of the actual problems facing the island and what exactly the Jones Act seeks to accomplish.

The feverish debate about whether to waive the Jones Act to expedite Puerto Rico's disaster recovery was akin to considering what to do about a paper cut for a cancer patient. Its waiver was—and remains—irrelevant to the core humanitarian problems at hand and any needed reaction. The key problems, including insufficient and delayed federal resources, and a lack of means to distribute supplies on the island, have nothing to do with the Jones Act.

What is the Jones Act? Why is it relevant to Puerto Rico? And why are people Facebooking about it now? I know the answer to the first two questions as my childhood was filled with conversations of the application of the Jones Act to Puerto Rico and other parts of the United States (bet you never thought you'd read that sentence!). My mother was one of the leading legal experts on this unusual topic, having argued a case relating to it before the U.S. Supreme Court in the late 1970s.

The Jones Act of 1920 is the law that modernized the principal of cabotage to Puerto Rican shipping. Cabotage is the idea that that the provision of certain services within America is reserved exclusively to American companies. The idea dates back to the founding fathers and was incorporated as part of the second law passed by Congress, the Tariff of 1789. The Tariff of 1789 restricted maritime trade between two places within the United States to ships that are 'U.S. Flagged'. This means the ship is built primarily in the U.S., has an American crew, and is owned by an American company. The Jones Act of 1920 modernized this long standing principal to the new reality of the growing American empire, expanding it to Puerto Rico, which, as a commonwealth, is part of the U.S. yet not a state.

Cabotage has a long history of support and adoption, often in transportation. Almost 50 nations have adopted some form of cabotage. It explains something you may never have thought about, which is why you can only fly domestic airlines when travelling within the U.S. Reserving domestic markets for domestic competition creates a set of clear winners: American companies, American workers, and often the military. The interest of the first two is straight forward. The military's interest is rooted in their desire for a domestic supply chain to produce equipment. Military interests are especially relevant in shipping given the logistics in supporting troops abroad. The military uses American built ships and trained merchant mariners. One of the five military academies is the United States Merchant Marine Academy.

The feverish debate about whether to waive the Jones Act to expedite Puerto Rico's disaster recovery was akin to considering what to do about a paper cut for a cancer patient.

Economists across the ideological spectrum oppose cabotage and the Jones Act, ranging from liberal Paul Krugman, to free-market libertarians at the CATO institute, to centrists at The Economist magazine. The common argument is that restricting competition raises costs and prices, and that the benefits of cabotage accrue to workers and owners of protected industries in America. The losses, opponents argue, are borne by the general public in the form of higher prices brought about by restricted competition. Given the standard benefits of trade and comparative advantage, the logic is that losses are greater than gains.

For Puerto Rico, this means that goods shipped to and from the island to and from the United States are slightly more expensive, while U.S. Flag ship owners, operators and crews benefit. Thus, in general times, there is a net negative economic impact for the island, although the magnitude is debatable. As the New York Federal Reserve found: "to the extent that it inhibits free trade, the Jones Act does indeed have a negative effect on the Puerto Rican economy, although the magnitude of the effect is unclear."

My best estimate is that the overall impact on Puerto Rico is small and negative, but probably rising over time. It is small because shipping is just one part of the overall economy and the cost differential is not that large. In addition, as the Federal Reserve and others have found, having a protected industry increases stability and predictability, which itself adds value, counteracting part of the increased costs. Thus, overall there is cost, but it is not that great. It pales in comparison to the numerous structural problems plaguing the Puerto Rican economy pre-Maria: massive levels of government debt, high unemployment, a shrinking labor force, etc.

The impact of the Jones Act on Puerto Rico has likely risen over time as the number of American built ships has declined. In the 1950s, pre containerization, America was a commercial shipbuilding power building more than 1/3 of the world's cargo volume. However, America's domestic commercial shipbuilding industry has largely vanished and today American built ships carry only 1/3 of 1 percent of total cargo. While there are many factors at play, a key moment occurred in the 1980s when America stopped matching foreign nations' shipbuilding subsidies. When foreign governments, particularly in Korea and later China, heavily subsidized their industry, American commercial ship building became uncompetitive. This trend also increased the importance of the Jones Act to the viability and value of the remaining American flagged ships.

The decline of American shipping overall has increased the value of the Jones Act for the military. As the Government Accountability Office found: "unrestricted competition from foreign-flag vessels could result in the disappearance of most U.S.-flag vessels in this trade, having a negative impact on the U.S. merchant marine and the shipyard industrial base that the Act was meant to protect."

The Jones Act also benefits certain American workers, include those who build and repair ships, and merchant mariners. That is why the AFL-CIO and organized labor support the Jones Act. In this manner debate regarding the Jones Act resembles other policy debates regarding policies that negatively impact specific manufacturing, construction and other 'quality blue collar' jobs. The ship building yard and manufacturing factory have much in common.

Thus, the impact more broadly on America from a permanent change in the Jones Act is less clear than the direct economic impact for Puerto Rico. It may well be that ending the Jones Act for Puerto Rico, or, in the extreme case, for all of America, would be a net negative for the American economy, depending on the magnitude and importance placed on military capability. Given the very large degree of taxpayer support for high levels of military spending – which constitutes over half of the U.S. discretionary budget – and the growing concern regarding the broader social and economic consequences of declines in our industrial base, there are substantial reasons to suspect that the economic and political consensus supporting cabotage laws remains intact, if not growing.

Understanding what is at stake with the Jones Act makes clear that it is not relevant to short-term disaster relief. It is relevant to a longer-run argument between competing political and economic forces. How this argument became part of the disaster response debate is an example of the political mantra: never let a crisis go to waste.

After the speculation about the Jones Act's supposed barrier to aid delivery spread virally online, the Department of Homeland Security was pressed by Rep. Nydia Valezquez (D-NY) to waive the Jones Act. Comparisons were made to prior waivers for hurricanes that landed in the continental states, fueling arguments that Puerto Rico was receiving second-class treatment. This fed into a broader narrative concerning whether Puerto Rico is more broadly treated equitably given its commonwealth status.

While that broad debate has great merit, focusing on the Jones Act component is wrong. It fails to appreciate the distinction between waivers based on oil and fuel shipping and cargo shipping. Those types of ships are not interchangeable and hurricanes to the Gulf Coast involved fuel and oil tanker shortages. As Keith Hennessy, director of the National Economic Council under President George W. Bush, stated regarding the waivers granted during Katrina and other times: "The direct benefits of a waiver were, in this case, small and diffuse. Waivers allowed 50K barrels per day here, and 100K barrels there, to arrive several days earlier than they would have otherwise. The waiver resulted in handfuls of short-term arrangements that moved fuel more expeditiously." Puerto Rico, did not need oil tankers, nor were the problems about getting fuel to the port.

This did not stop members of the media, perhaps looking for quick stories, from publishing commentary that ignored the intricacies of shipping and disaster relief. Many outlets ran stories with scary headlines like "The Jones Act, the obscure 1920 shipping regulation strangling Puerto Rico, explained**."**

The media frenzy then created an opportunity for long-time opponents of the Jones Act to capitalize. Senator John McCain (R-AZ) introduced legislation to permanently repeal the Jones Act, pressing his case for a permanent waiver on social media.

This confluence of narratives, a lack of detail and understanding of specific facts relating to shipping, and the perception that Puerto Rico was not being treated fairly helped lead to the Jones Act issue going viral. Going forward, the public will likely lose interest in the Jones Act as quickly as they gained interest. But should the issue re-enter public debates it's worth noting that the economics and politics of Trump's America First agenda align with the Jones Act and cabotage, more generally.

More broadly, those concerned with Puerto Rican disaster assistance in the short term, and how to restore the economy of Puerto Rico in the long term, should focus on the real economic problems. As my Brookings colleague Jason Miller correctly argues, this requires a long-term, sustained commitment of economic resources and assistance to the Commonwealth. It may also require rethinking the sustainability of the island as a commonwealth, or whether it should join the United States as the 51st state. Puerto Rico should not be used to press a long-standing economic debate regarding where to draw the line in which parts of our nation's economy and military security are opened up to foreign competition. Critics of the President and those who wish to show support for a stronger disaster recovery ought to think twice before retweeting or Facebooking an enticing headline purporting to link obscure laws to topical disasters. They may be inadvertently supporting policies they actually oppose.

Houston's Sunnova delivering power to Puerto Rico

By Chris Tomlinson October 13, 2017 Updated: October 13, 2017 1:36pm

If you had billions of dollars to rebuild an electric grid for 3.4 million people from scratch, how would you do it?

Puerto Rico has that opportunity after Hurricane Maria wiped out its antiquated electricity system, and solar power companies are lining up to help. Most of the attention has focused on Telsa CEO Elon Musk's very public Twitter exchange with Puerto Rican Gov. Ricardo Rosselló, but Houston-based Sunnova Energy already has almost 10,000 customers with solar panels on the island.

"Everybody can agree that we should not go back to the status quo," Sunnova CEO John Berger said. "We need to have a better energy system, and the technology is here now. We need to adopt that technology and move forward."

Almost a month after the hurricane, 84 percent of customers on the island remain without grid power, relying instead on generators. Sunnova is already the largest residential solar provider in Puerto Rico. It owns the equipment, installs it on rooftops and then sells the electricity to the customer. Sunnova maintains and repairs the equipment. The customer only pays for the power.

Until recently, though, the Puerto Rico's public utility made it difficult for customers to generate their power without also relying on the electric grid.

"We've had trying times with the public utility there trying to get interconnected," Berger told me. "We were looking toward installing batteries for our customers to provide them with the kind of reliability that would be really handy at this point in time. Unfortunately, Maria hit before we had time to get everything together."

Sunnova is now scrambling to deploy equipment that will allow customers to generate power for the weeks and months that it will take to restore the grid. Sunnova's batteries began arriving Monday, and Berger flew to San Juan on Wednesday.

"We have a field office there. We have hundreds of people who work for our dealers and installers. We are way, way ahead of everybody," Berger said. "This looks like it will be a seminal moment in the energy business, when people recognize that the change is here. Solar and batteries are not the future, it's the present."

Rosselló agrees, saying at a news conference that Puerto Rico has a once-in-a-generation chance to completely overhaul the electric grid.

"If there is a silver lining, we can start reconceptualizing how we want to produce energy here in Puerto Rico and distribute it and do it in a more reliable fashion," Rosselló told reporters.

The U.S. territory has relied on oil-fired power plants in the past, and has only recently added a wind farm and small-scale solar fields. Pattern Energy's wind facility survived the storm well but is useless without a functioning grid. Solar offers greater resiliency because it can be scattered around the island to minimize reliance on vulnerable transmission lines.

Tesla has successfully built large-scale solar projects with battery storage in American Samoa and Hawaii. Musk has famously promised a huge 100-megawatt battery to improve reliability in South Australia within 100 days, or it's free. Last week Musk said Tesla would delay rolling out a battery-powered semi-truck to focus on shipping batteries to Puerto Rico.

"The Tesla team has (built solar grids) for many smaller islands around the world, but there is no scalability limit, so it can be done for Puerto Rico too," Musk said in a tweet.

German company Sonnen also announced two weeks ago it would begin shipping solar panels and batteries to Puerto Rico to build stand-alone microgrids for hospitals and other emergency facilities. The company began working with local renewable energy company Pura Energia last year to increase resiliency to storms.

Berger said he doesn't fear competition from other renewable energy companies because the need is so great.

"I really do believe that if you do the right thing, it will come out well for you as a company," Berger said. "This is not the time to rip people's faces off and make a lot of money, this is a time to make sure people are taken care of as fast you can. We're running a business, yeah, but there has to be a balance."

Puerto Rico must also strike a balance in building its new electric system. Natural gas companies want the island to build liquefied natural gas facilities and buy combined-cycle turbines to replace the oil-burning power plants. But elected officials must choose the right percentage of big centralized power sources and smaller ones that can be distributed across the island. How much generation is really needed, if the public utility employs the latest tools to reduce demand during peak periods?

Puerto Rico has a chance to use the latest, most efficient technologies and become a model for what the rest of the world's grids can become. Puerto Rico could cut demand for fossil fuels in half.

Houston's Sunnova is trying to prove that solar and batteries can be an important and reliable source of power, and if it succeeds, the company could pave the way for Houston to retain the global energy capital crown.

THE WALL STREET JOURNAL.

https://www.wsj.com/articles/privatize-puerto-ricos-power-1498776904

COMMENTARY

Privatize Puerto Rico's Power

It would reduce the cost of living and spur economic growth.

In the Old Town district of San Juan, 2016. PHOTO: PAUL J. RICHARDS/AGENCE FRANCE-PRESSE/GETTY IMAGES

June 29, 2017 6:55 p.m. ET

This article was written by Andrew G. Biggs, Arthur J. Gonzalez, Ana J. Matosantos and David Skeel, four of the seven members of the Financial Oversight and Management Board for Puerto Rico. They were appointed by President Obama based on recommendations by the Democratic and Republican Congressional leadership.

In July 2016, Puerto Rico defaulted on its more than $70 billion of debt, putting at risk those liabilities as well as more than $50 billion in public pension obligations. Just before the default, Congress had enacted the Puerto Rico Oversight, Management and Economic Stability Act, or Promesa, which established the Financial Oversight and Management Board for Puerto Rico. Today, under the board's guidance, Puerto Rico is undertaking the largest municipal restructuring in U.S. history, with the goal of sorting out its longstanding fiscal issues and reigniting economic growth.

The board has worked steadily toward these goals over the past year. After rejecting turnaround plans submitted by two successive Puerto Rican governors, last March the board approved an amended plan that includes a nearly 30% cut in government health spending, sizable reductions in government subsidies, school closings, consolidations of government agencies, and the most extensive public-employee pension reforms ever passed in the U.S.

This week, after much deliberation, the board rejected the Puerto Rico Electric Power Authority's request to move forward with a restructuring support agreement with its creditors. Puerto Rico's electricity costs are two to three times as high as mainland levels. The board concluded that lowering the price of electricity and spurring economic growth depended on reforming Prepa's operations, not merely restructuring its credit. Affordable electricity could boost growth by up to half a percentage point annually, raising family incomes on the island, stemming outmigration and increasing funds available to repay creditors.

Successful reform will require a true transformation of Puerto Rico's power sector. As the Center for the New Economy, a Puerto Rican think tank, put it in a 2009 report: "PREPA's operations are substantially less efficient than the operations of its U.S. counterparts and it underperforms in virtually every area of operations under consideration." While mainland utilities have reduced costs by shifting to natural gas, Prepa relies on outmoded oil-fired generating plants. The company also loses 12% of sales revenue to faulty billing and theft, three times the U.S. average. Prepa has languished under heavy administrative overhead and politicized management, which contribute to its failure to deliver reliable, cost-effective energy.

We believe that only privatization will enable Prepa to attract the investments it needs to lower costs and provide more reliable power throughout the island. By shifting from a government entity to a well-regulated private utility, Prepa can modernize its power supply, depoliticize its management, reform pensions, and renegotiate labor and other contracts to operate more efficiently. A reformed Prepa is key to restoring opportunity for the people of Puerto Rico.

Prepa’s credit restructuring proposal would make effective privatization impossible. Under the proposal, bondholders would grant Prepa a five-year reprieve from principal payments and some would accept a 15% reduction in debt. In return, those bondholders would be guaranteed repayment of remaining debt through an electricity surcharge. If demand for electricity continues to decline, the surcharge will have to rise to compensate the creditors. The Prepa proposal and its guarantee to current creditors would increase costs to ratepayers while leaving new investors—the ones Prepa needs to transform its operations—assuming all the risk.

Private investors would not involve themselves with Prepa on those terms, meaning the company would lack the capital to modernize. Electricity costs would remain high, and economic growth, families and bondholders would suffer. The board’s economists estimate that without pro-growth energy reforms, funds available to pay Puerto Rico’s creditors would be reduced by $15 billion.

The Board’s decision was not easy. Promesa gave preferential treatment to the credit support proposal, not requiring it to satisfy the same criteria as other debt restructuring settlements. Some members of Congress have suggested that Prepa’s credit agreement should have been considered a “done deal.” But not all the proponents of Promesa understood its provisions in that way. The law clearly expresses that the board must authorize any voluntary debt restructuring, and the agreement proposed by Prepa itself explicitly requires board authorization.

The board cannot amend the Prepa agreement, as it did with the fiscal plan submitted by Puerto Rico’s government. But the board will pursue improved terms of agreement for creditors, and more equal sharing of risk between current creditors and new investors.

Transformation of Puerto Rico’s energy sector is only one part of a broader reform agenda, which must include fundamental public pension and welfare reforms, as well as the modernization of labor laws. Prepa’s viability must be addressed in the context of these larger solutions to Puerto Rico’s fiscal and economic crisis. But unless Prepa can be modernized, Puerto Rico’s economic recovery and its ability to repay its debts will suffer.

SESSION 6:
THE BROADBAND

Wharton
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ALTERNATIVE INVESTMENTS
Initiative

USTelecom Industry Metrics and Trends 2018

March 1, 2018

Patrick Brogan, VP Industry Analysis

pbrogan@ustelecom.org

202-326-7282

USTELECOM | THE BROADBAND ASSOCIATION

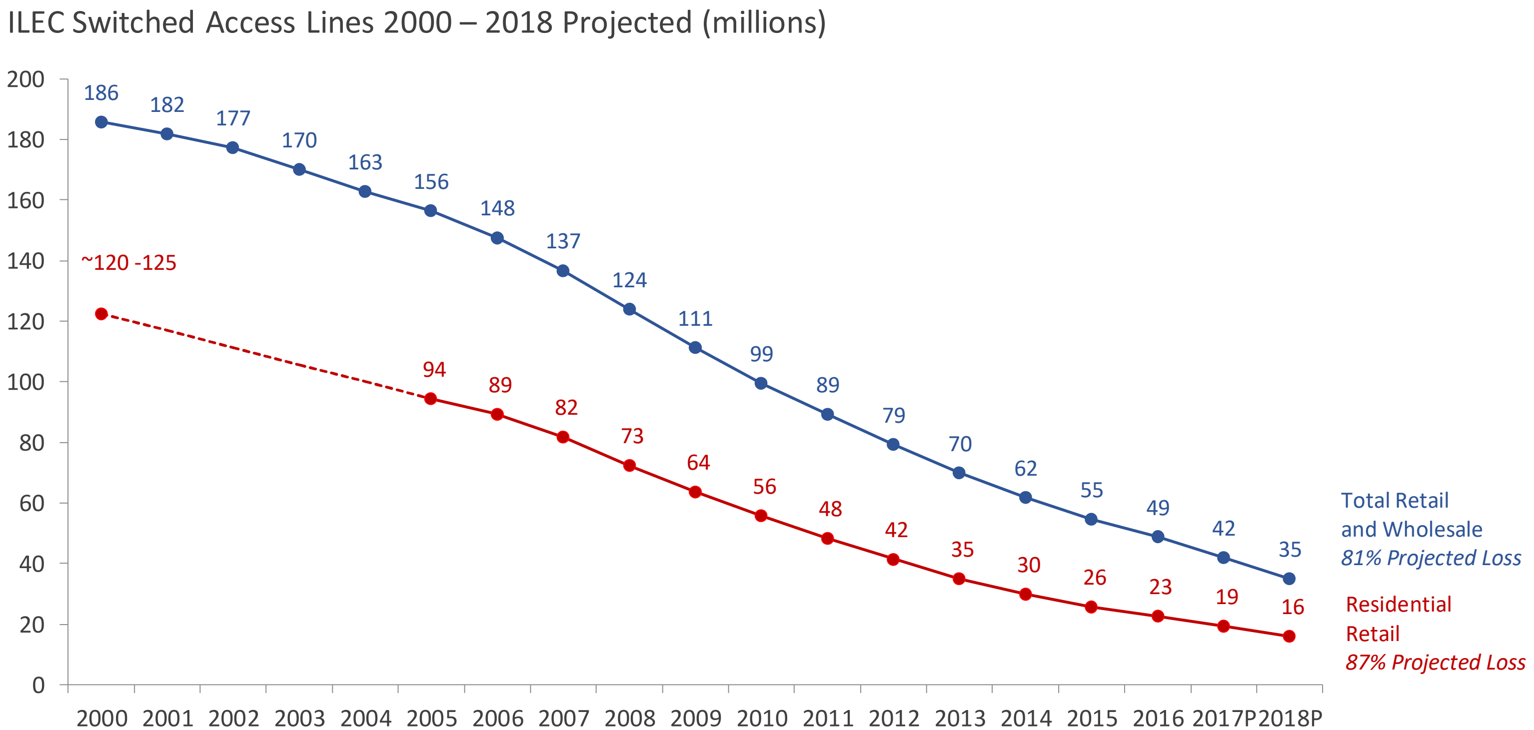
Contents

<u>Note on data and projections</u>: Unless otherwise noted, the data in this presentation are based on sources that are current through year-end 2016. Projections are denoted with a "P". In the first two sections, projections for 2017 and 2018 are USTelecom straight-line estimates based on the most recent 6-month trends. Accuracy of projections is not guaranteed, and may depend on factors such as level of aggregation, technological maturity, and adoption curves. In the third section, projection are provided directly by our source.

<u>Note on terminology</u>: As used in this presentation, broadband includes fixed and mobile services. Mobile broadband is provided over cellular wireless networks. Wired broadband is a subset of fixed broadband and predominantly includes services using fiber, DSL, and cable technologies. Fixed broadband includes wired broadband plus fixed wireless and, sometimes, satellite. The broadband deployment data below exclude satellite from fixed broadband while the broadband connections data include satellite in fixed broadband.

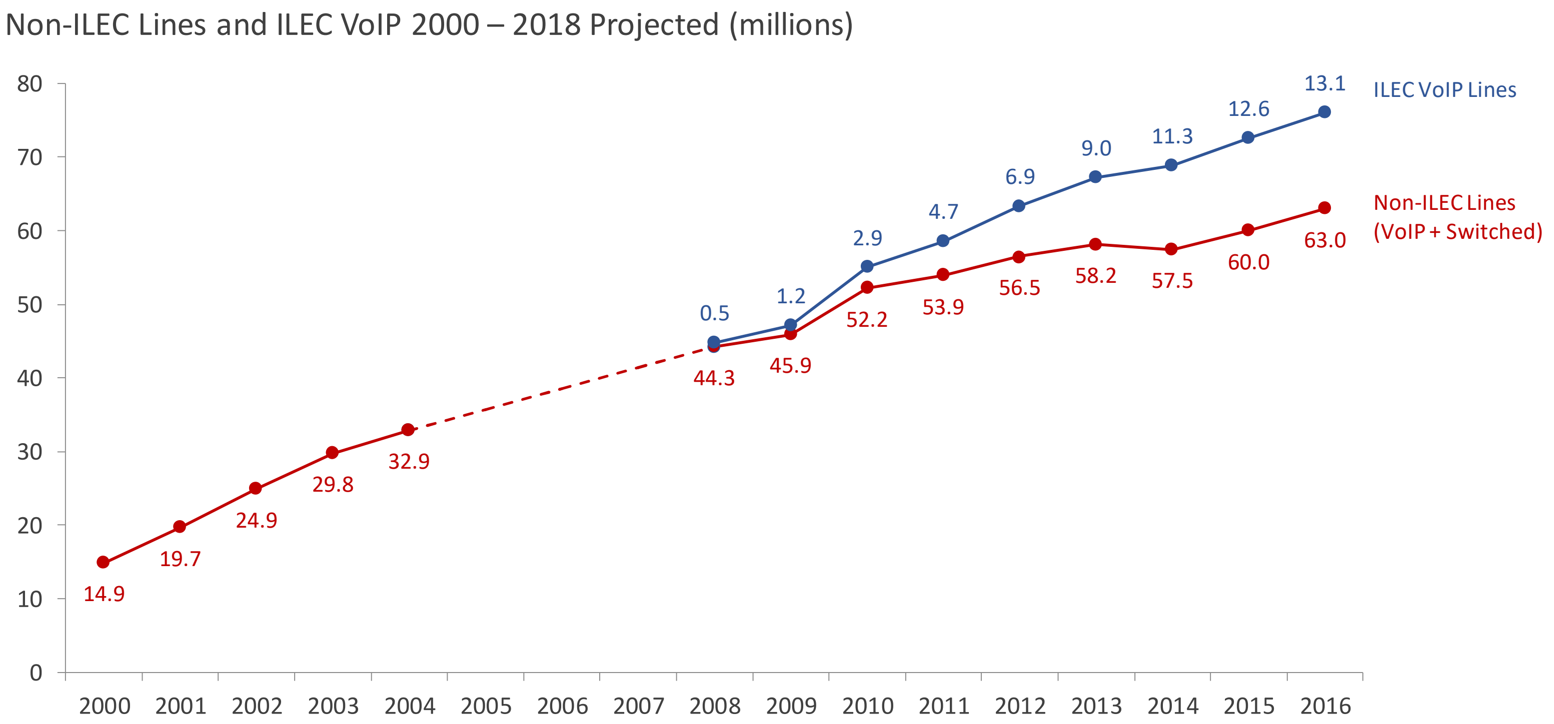
The Transition from Legacy Voice Networks to Mobile and Internet Communications

Dramatic Decline in Traditional Wired Voice Connections Continues



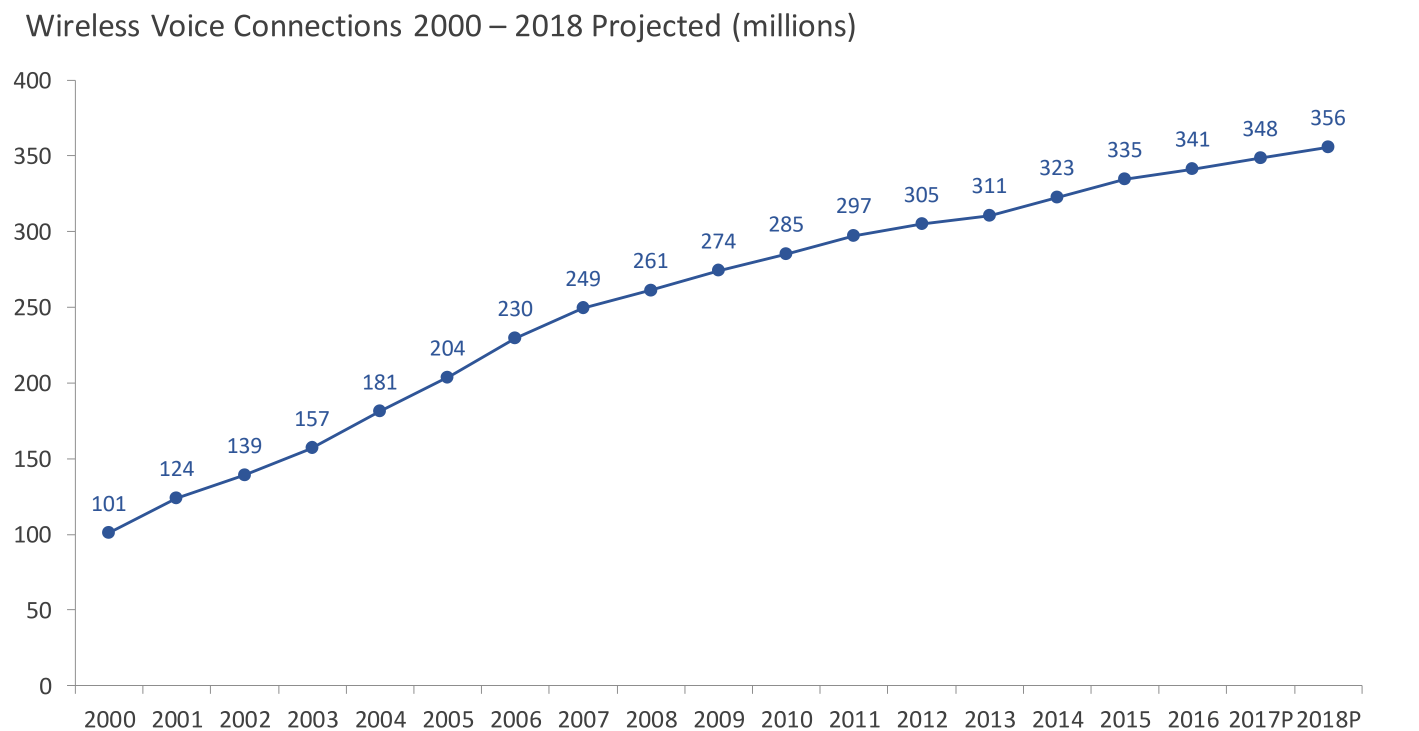
Source: FCC and USTelecom analysis. Includes primary and non-primary lines. Excludes ILEC VoIP and UNE-L (unbundled loops). Projections based on most recent 6-month straight-line run rates. Pre-2005, carriers with <10,000 lines did not report and FCC did not report residential lines.

Wired Voice Alternatives Are Growing



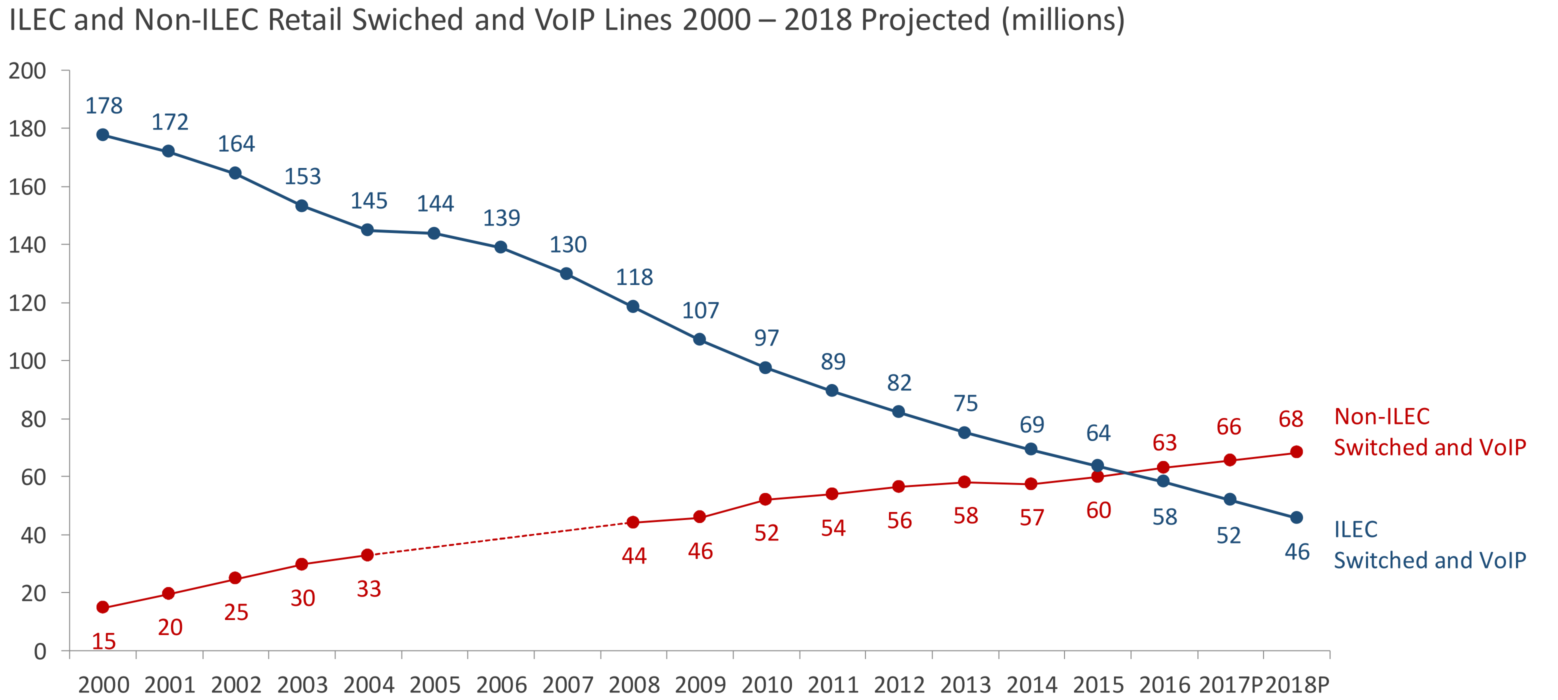
Source: FCC and USTelecom analysis. Includes primary and non-primary lines. Includes non-ILEC lines using ILEC wholelsale lines. Pre-2005, carriers with <10,000 lines did not report and FCC did not report residential lines. 2005-7 Non-ILEC data excluded due to data reliability issues. Projections based on most recent 6-month straight-line trend.

Wireless Voice Connections Are Growing Rapidly



Source: FCC and USTelecom analysis. Projections based on most recent 6-month straight-line run rates.

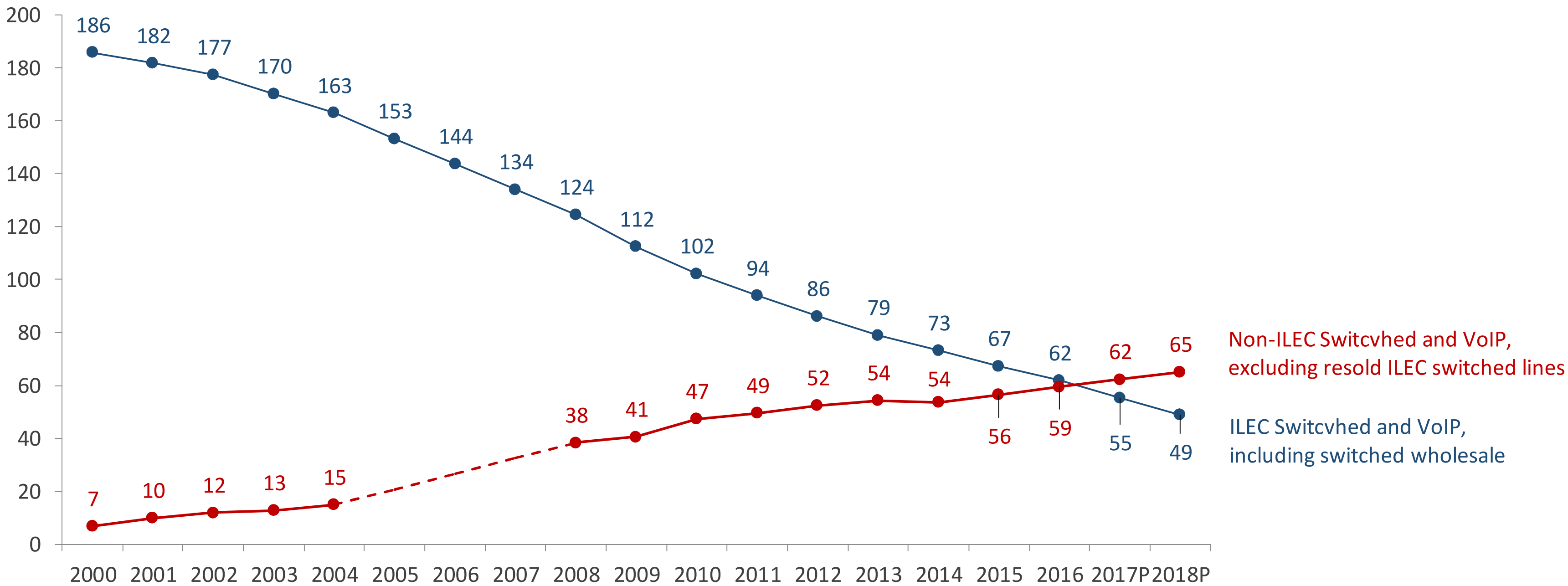
Non-ILECs Have a Greater Share of Wired Voice Lines Than ILECs



Source: FCC and USTelecom analysis. Pre-2005, carriers with <10,000 lines did not report. Pre-2008 data exclude VoIP. ILEC lines exclude wholesale. 2005-7 Non-ILEC data excluded due to data reliability issues. Projections are straight-line based on most recent 6-mnth trend.

Non-ILECs Have Also Surpassed ILECs in Wired Voice Even When Considering Wholesale Lines

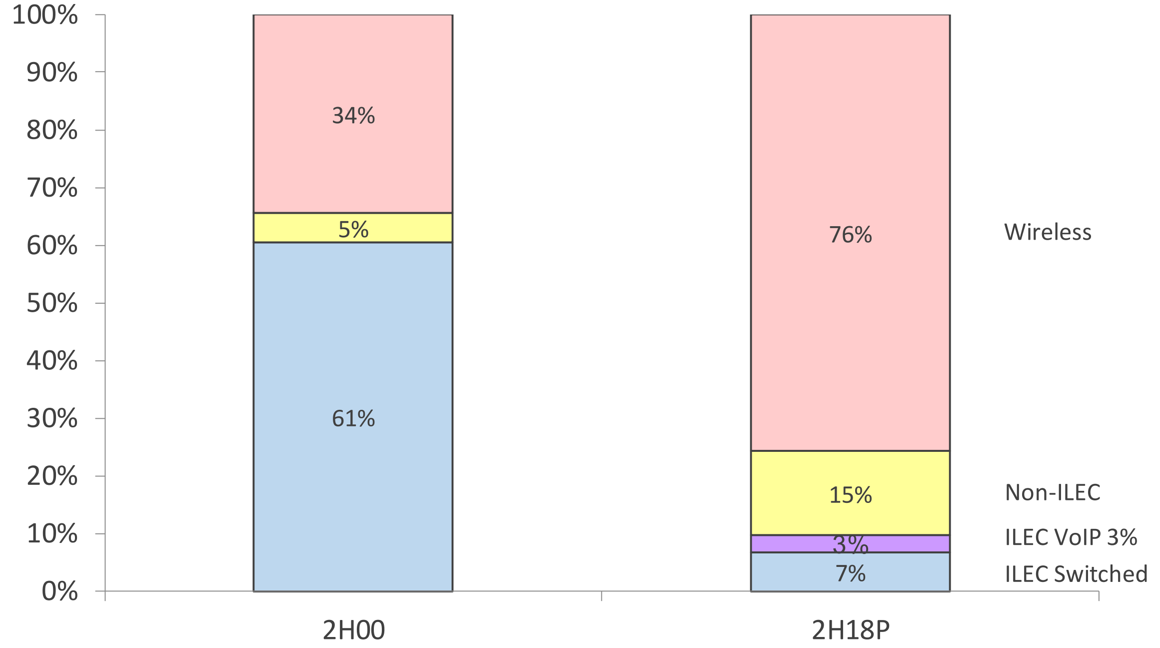
ILEC and Non-ILEC Switched and VoIP Lines 2000 – 2018 Projected (millions)



Source: FCC and USTelecom analysis. Pre-2005, carriers with <10,000 lines did not report. Pre-2008 data exclude VoIP. ILEC lines exclude wholesale. 2005-7 Non-ILEC data excluded due to data reliability issues. Projections are straight-line based on most recent 6-month trend.

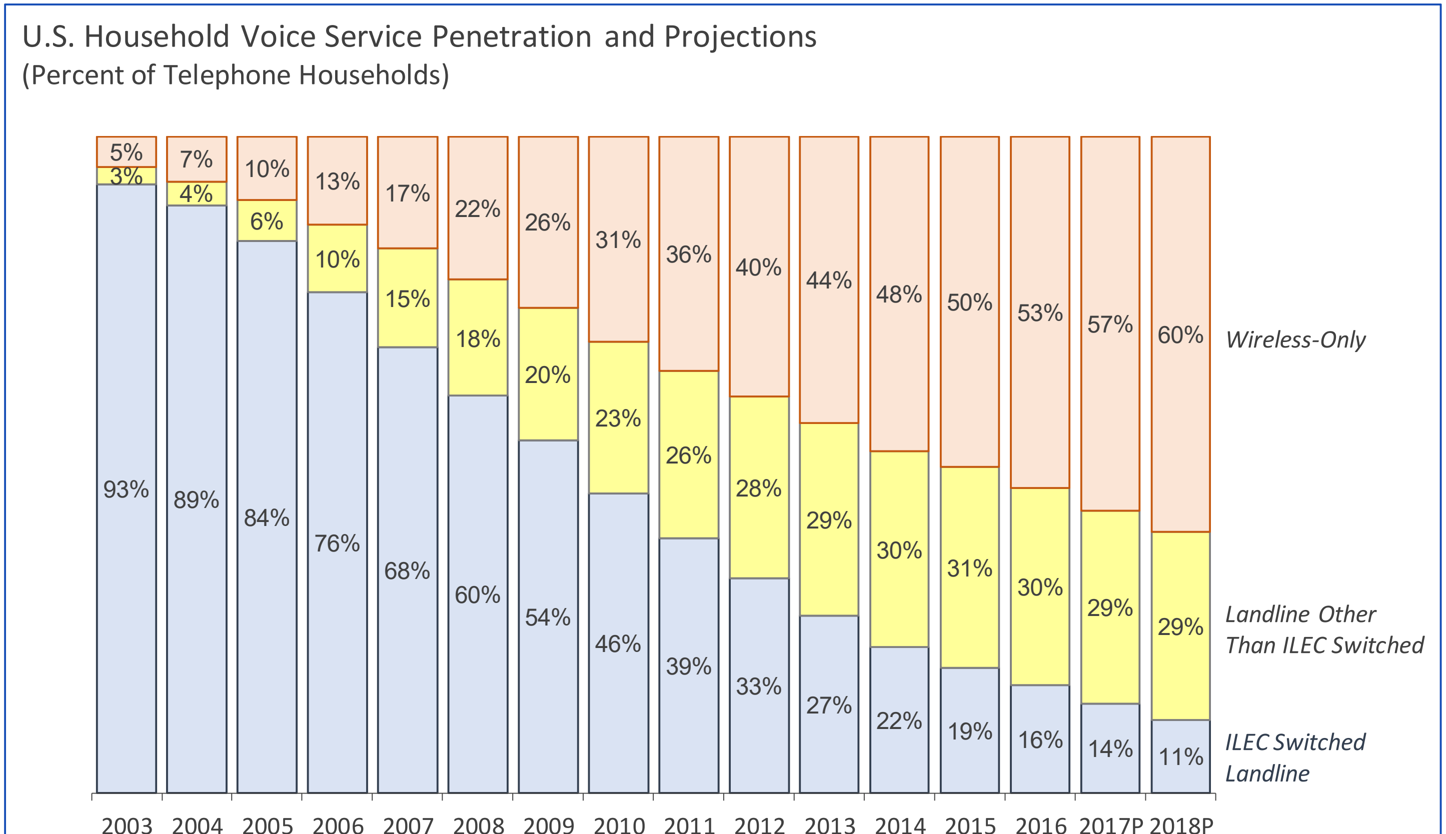
There Are Three Times as Many Wireless as Wired Voice Connections in the U.S.

Change in Share of Total U.S. Voice Connections, 2000 to 2018 Projected



Source: FCC, USTelecom Analysis. Incudes residential and business. Projections are straight-line based on most recent 6-month trend.

Households Have Shifted to Wireless and IP Voice

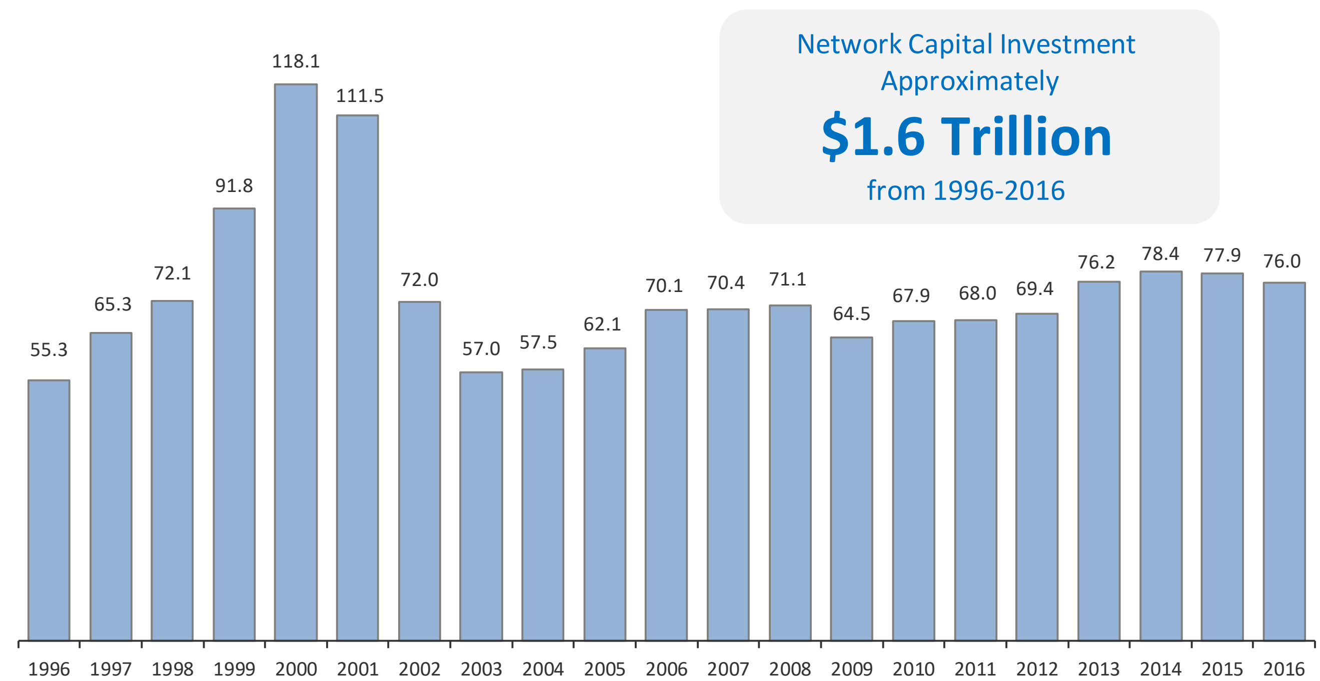


Sources: FCC, CDC, Census, USTelecom Analysis (2008-15P); and FCC, CDC, NCTA, Financial Reports, USTelecom Analysis (2003-7); projections based on six-month run rates.

Broadband Investment, Deployment and Adoption

Competing Broadband Providers Have Invested $1.6 Trillion in Capital since 1996

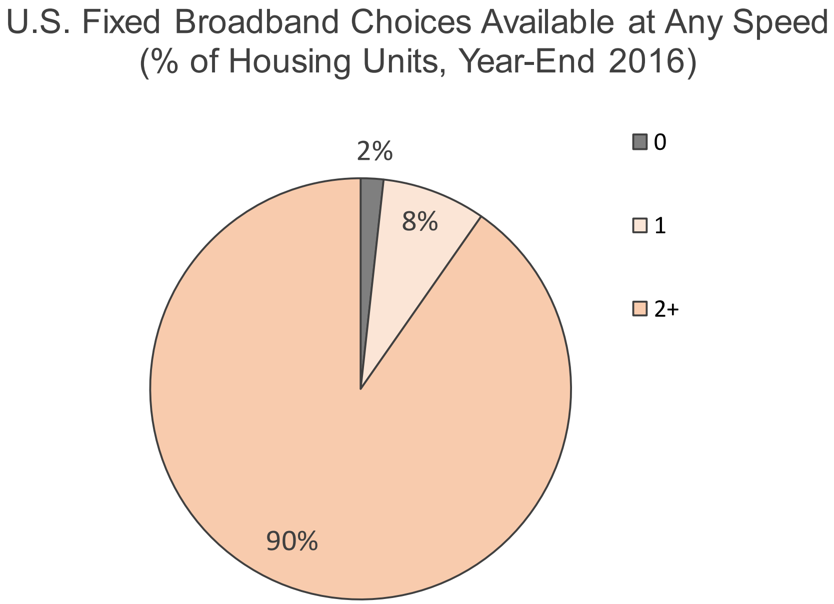
U.S. Broadband Provider Capital Expenditures,1996-2016 ($ billions)

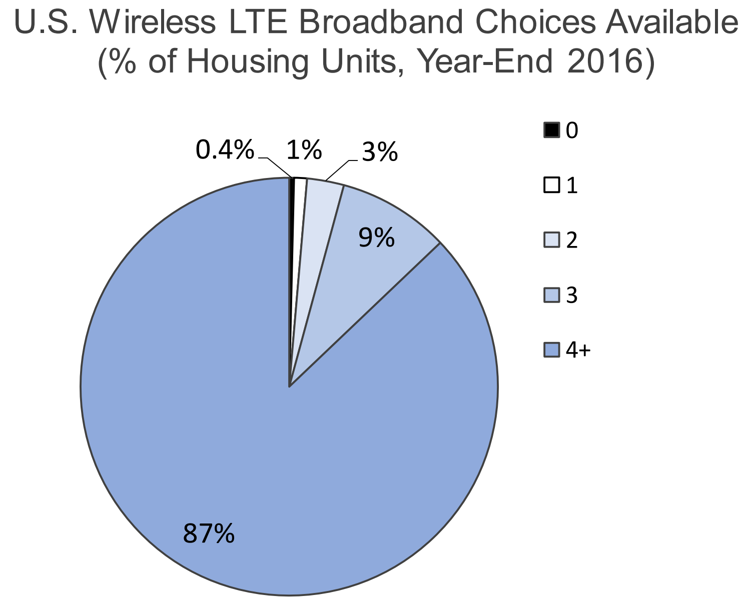


Source: USTelecom (1996-present) and Yankee Group (1996-2010). Figures are rounded.

Data includes wireline, wireless, and cable providers.

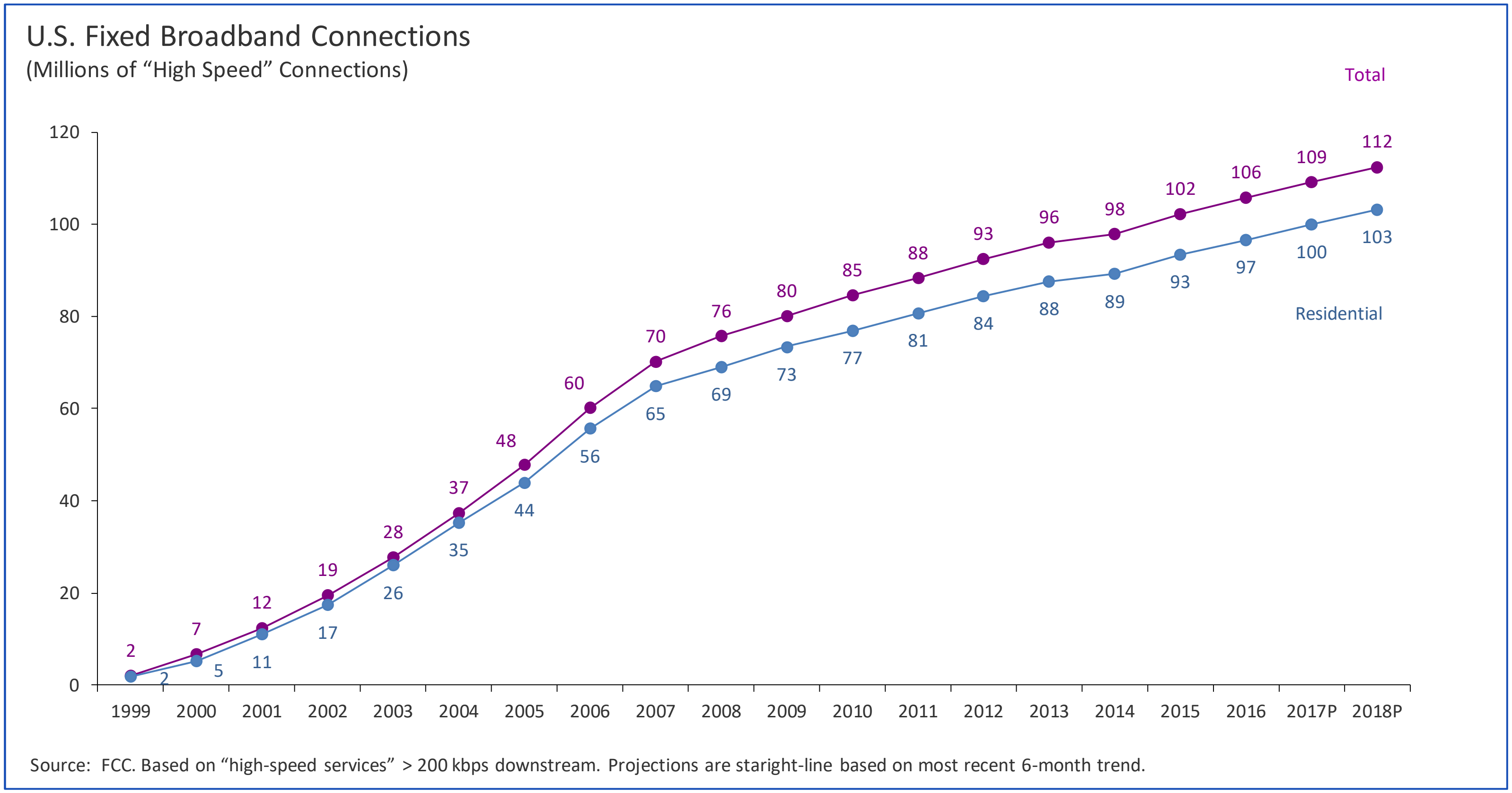
Broadband Investment by Competitive Providers Has Brought Near-Nationwide Deployment



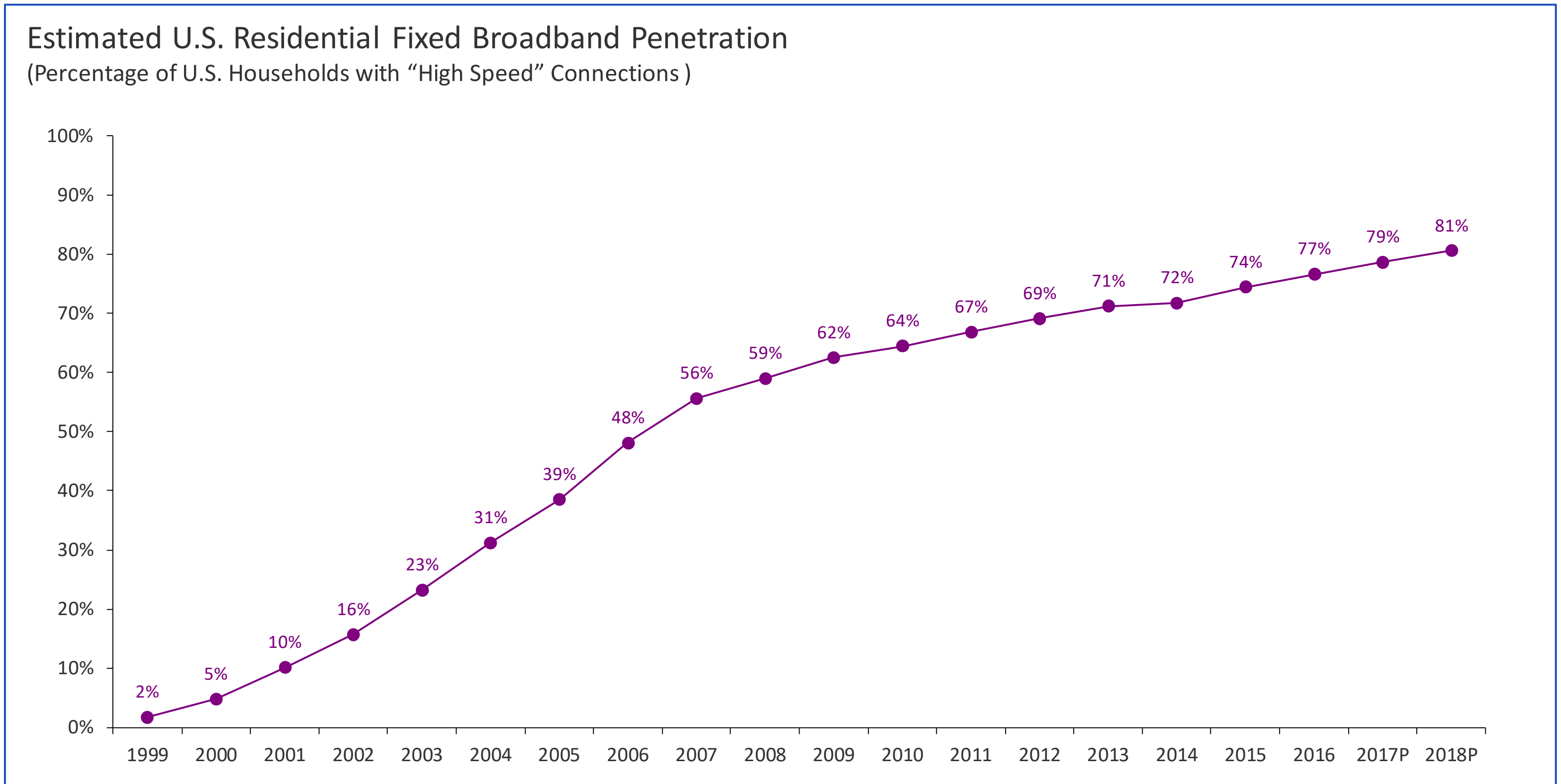


Source: FCC, USTelecom, and Telcodata CensusNBM.com.

Investment Has Enabled Widespread and Ongoing Broadband Adoption

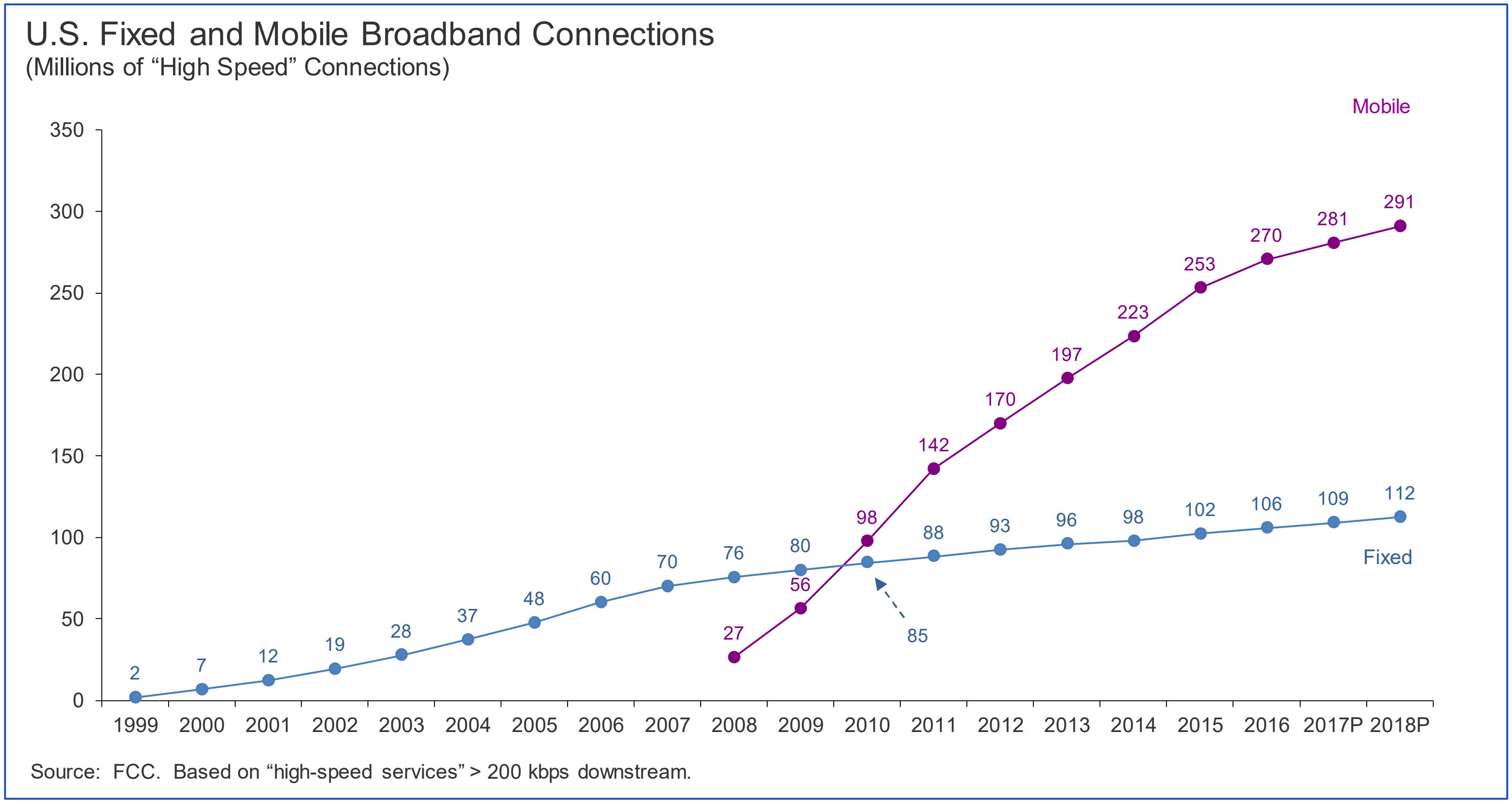


Fixed Broadband Penetration Is Nearing Four-Fifths of U.S. Households



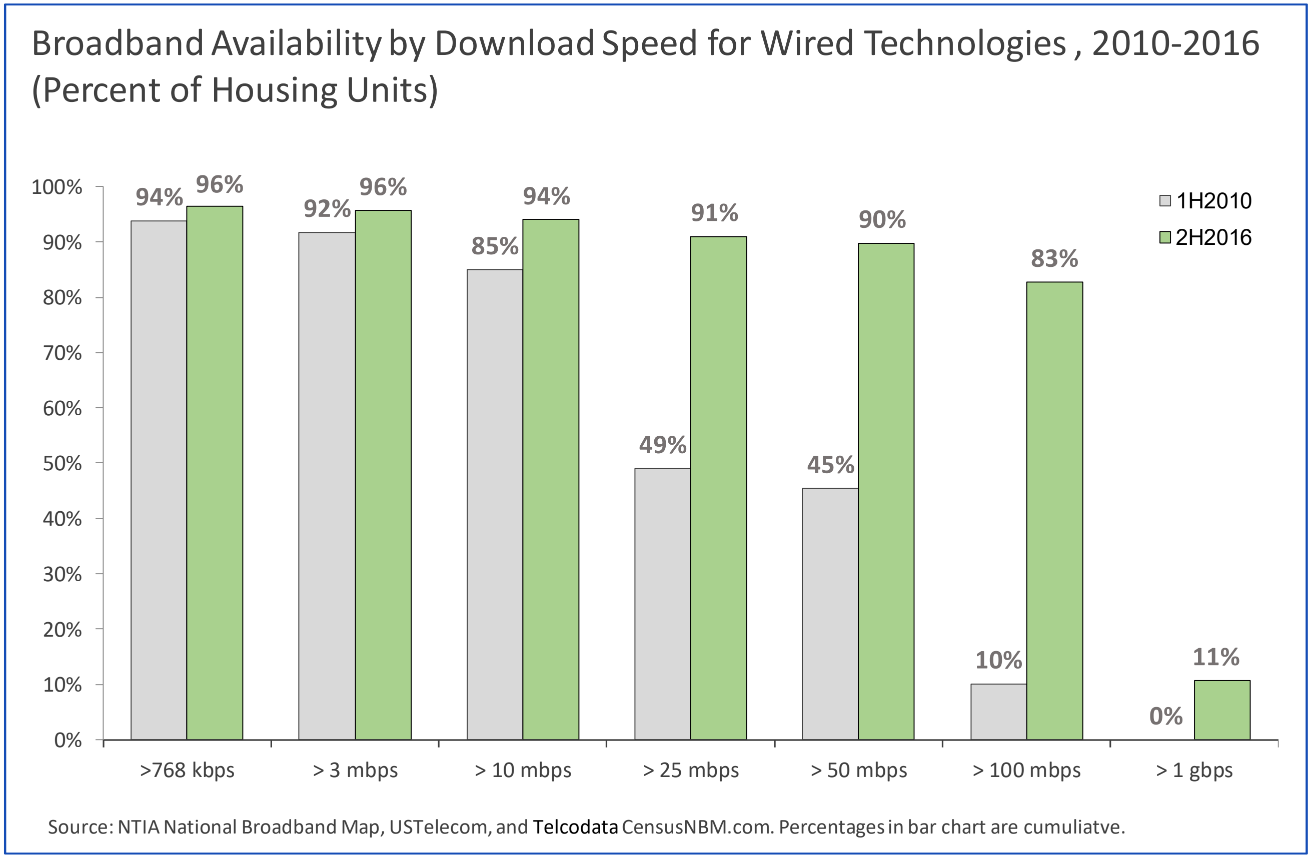
Source: FCC, Census, and USTelecom Analysis. Based on "high-speed services" > 200 kbps downstream. Projections based on most recent 6-month trend.

Mobile Broadband is Growing Rapidly



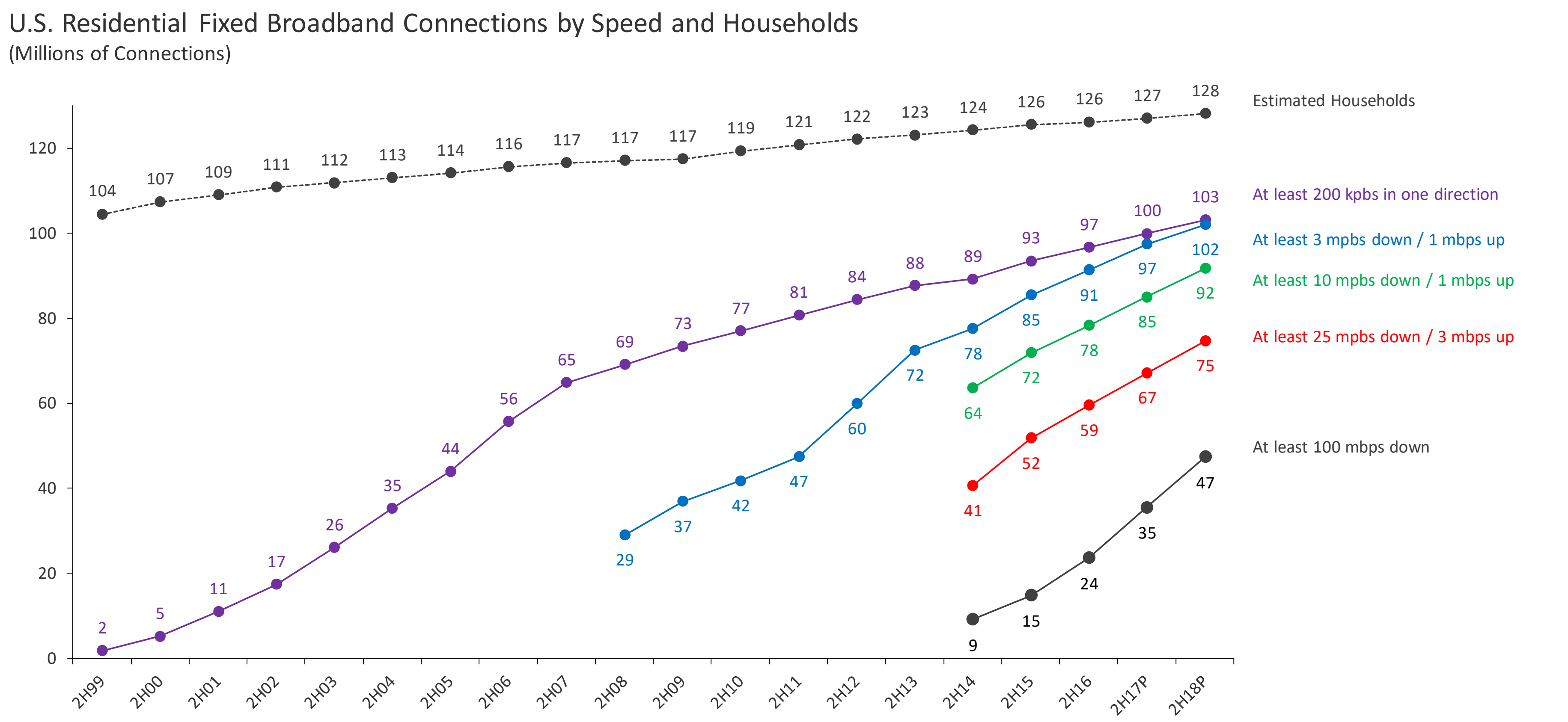
U.S. smartphone adoption estimates range from 77% of adults (Pew Internet, January 2018) to 82% of households (Consumer Technology Association, January 2018)

Providers Are Deploying Networks Capable of Providing Higher Speeds



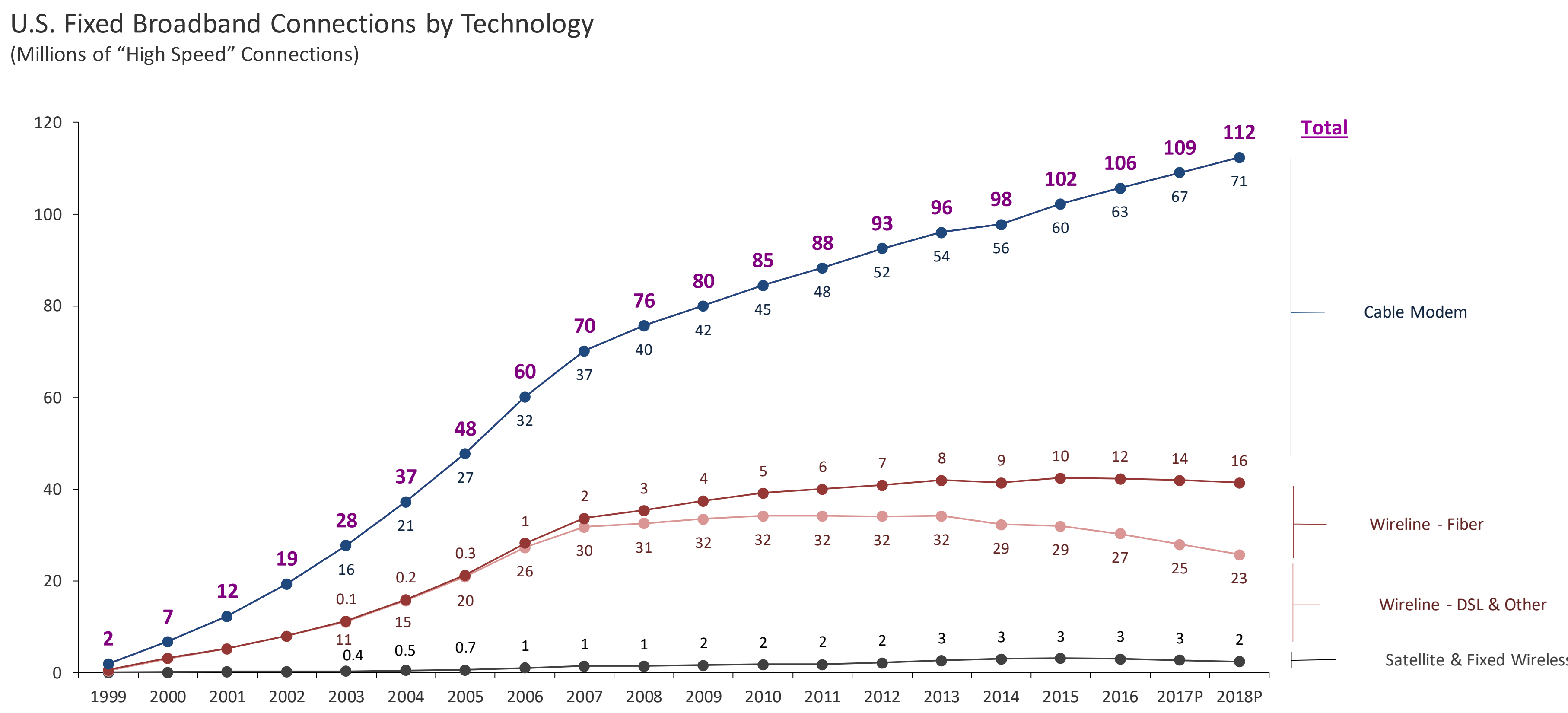
Fourth generation mobile broadband was available to less and 1% of Americans in 2010 and 99.6% of Americans in 2016
Speeds are in excess of 10 mbps, in some cases approaching 20 mbps (opensignal.com)

Consumer Are Choosing Services with Higher Speeds



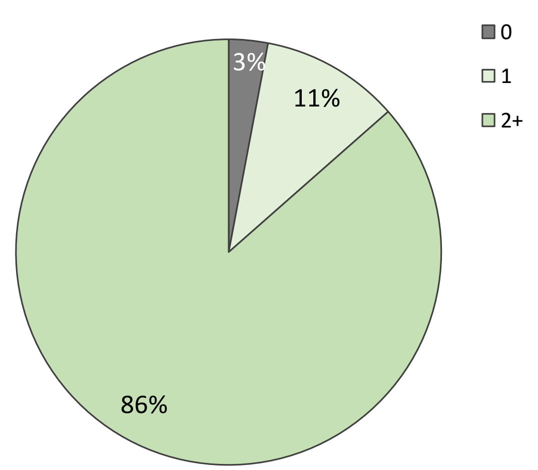
Source: FCC, Census, USTelecom. "At least" lower-speed categories are inclusive of higher-speed categories. Projections based on most recent 6-month trend.

Broadband Has Been a Competitive Industry from Its Inception



Source: FCC. Based on "high-speed services" > 200 kbps downstream

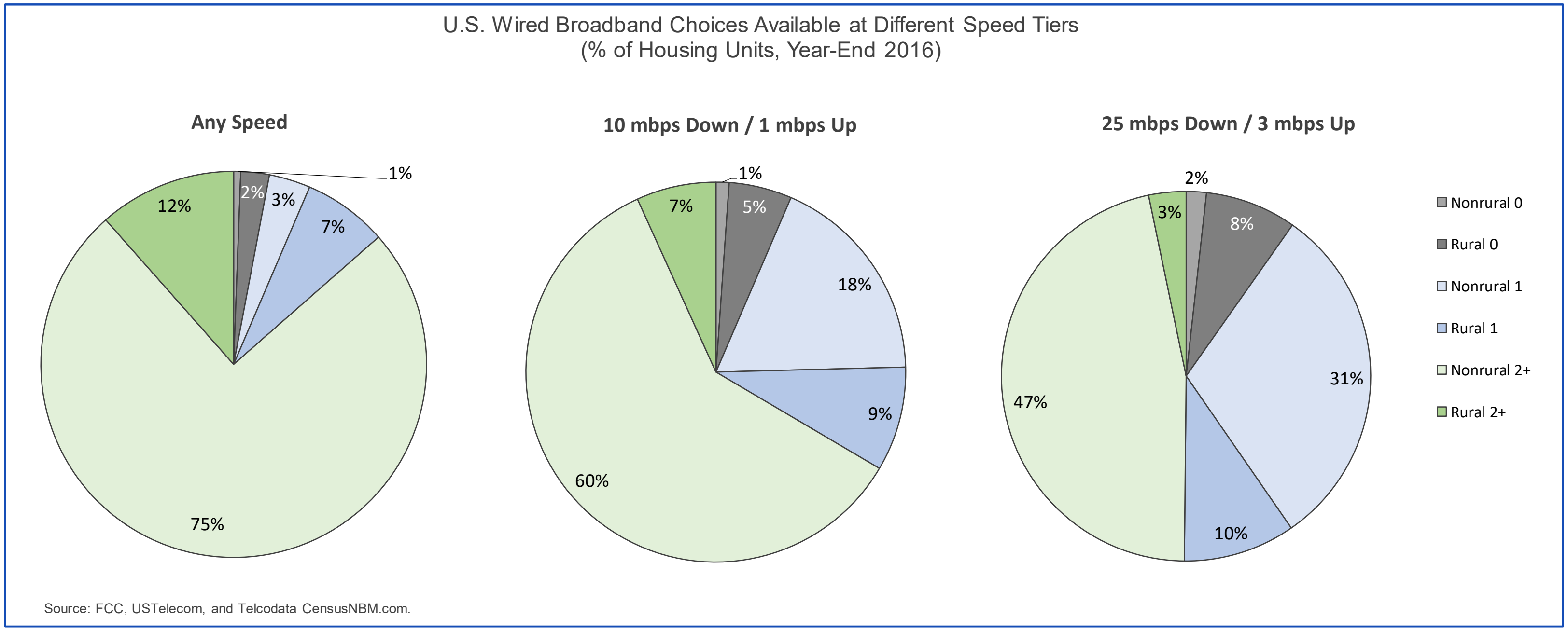
Core Competitive Broadband Infrastructure Is Widely Available



Source: FCC, USTelecom, and Telcodata CensusNBM.com.

As shown above, mobile wireless broadband is also competitively deployed with 96 percent of Americans able to choose among three or more providers. The next several charts focus narrowly on wired broadband competition due to historical data limitations. Fixed broadband, which includes fixed wireless services, would show even greater competitive overlap.

Competitive Availability Varies with Speed

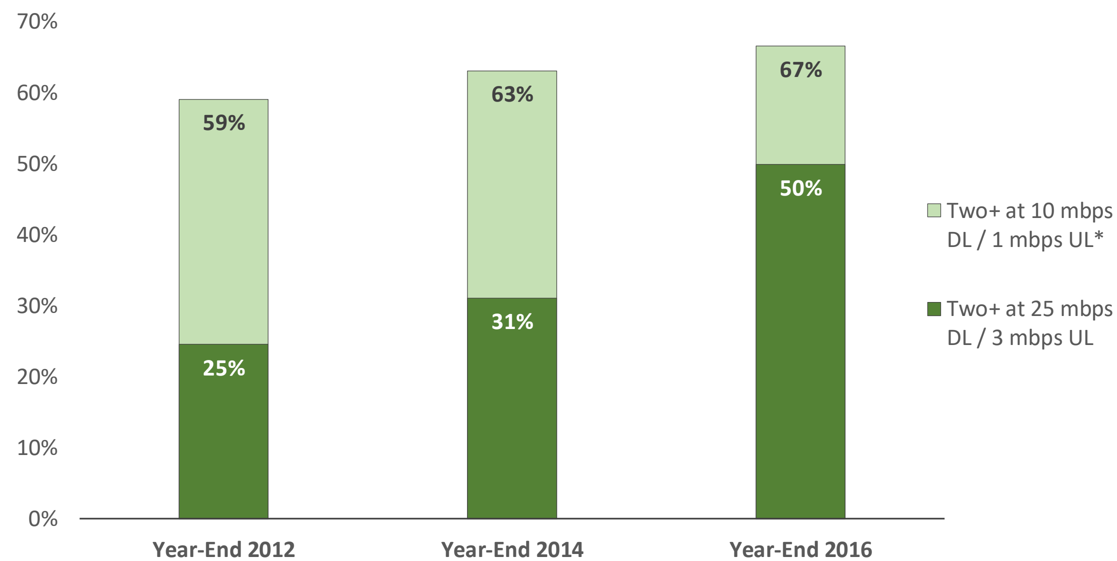


In a continual process of competitive leap-frog, wired broadband providers are at different stages of ongoing network upgrades

As Providers Invest in Network Upgrades… Competition at Higher Speed Is Growing

U.S. Broadband Competition: Services Deployed Widely and Speeds Growing Rapidly
(% of U.S. Housing Units with Two or More Wired Broadband Options Available at Selected Speed Tiers, 2012 to 2016)

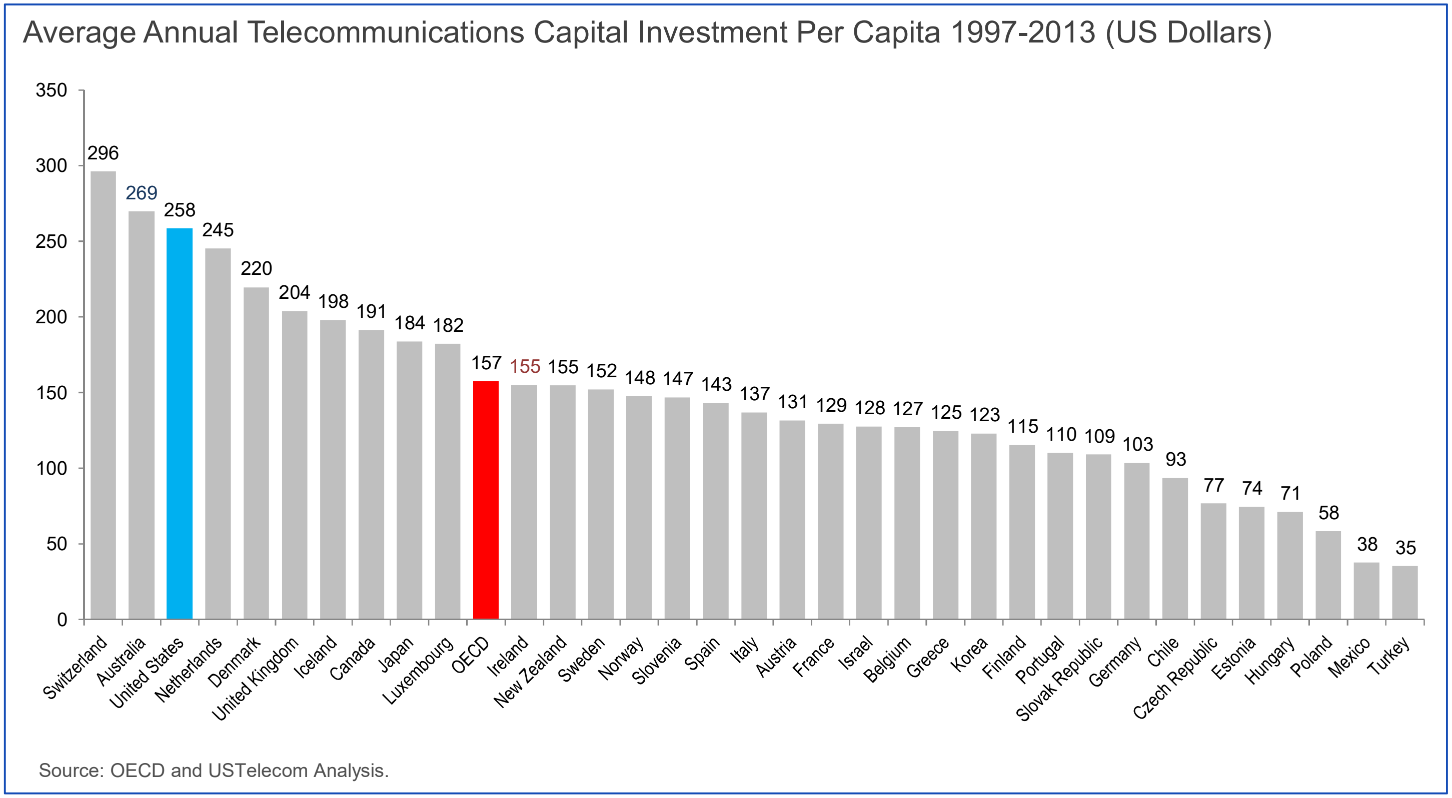
Two or more wired broadband providers are available to 86 percent of Americans and at least one option is available to 97 percent. Competition occurs dynamically over time as providers upgrade network speed and quality. In addition to wired options from telecom, cable, and others, multiple satellite and wireless options are available to nearly all Americans.



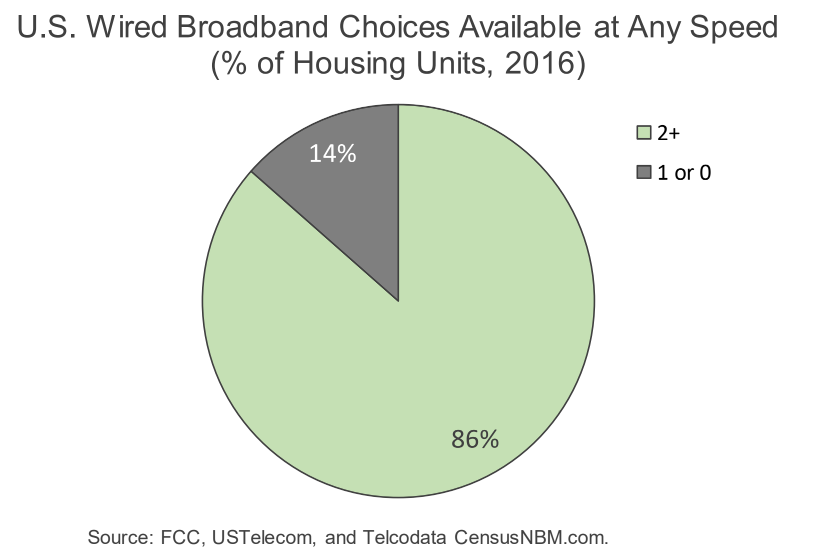
Sources: FCC, NTIA, USTelecom, and Telcodata CensusNBM.com.

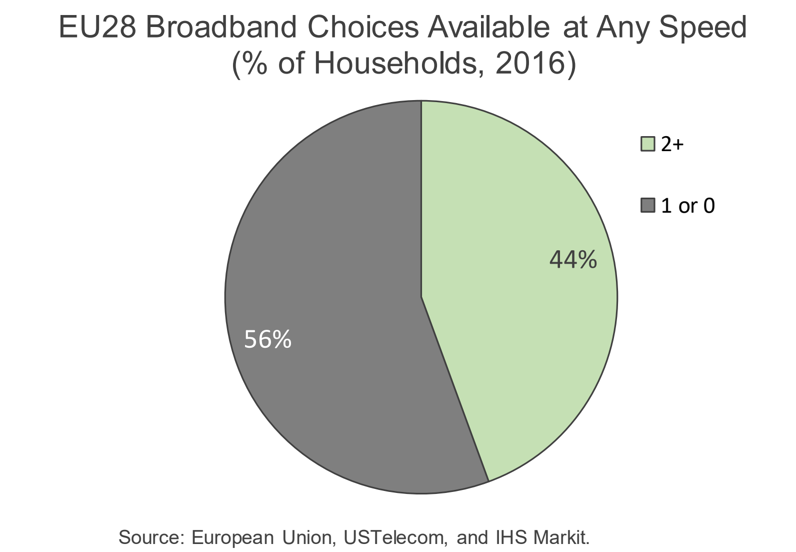
*10 megabit per second download / 1 megabit per second upload estimated for 2012 based on 10m download / 768 kilobit upload data available from NTIA. Data were adjusted proportionately according to FCC 2016 reported data for 10m DL / 1m UL and 10m DL / 768k UL.

U.S. Invests More in Broadband than Most Industrialized Nations

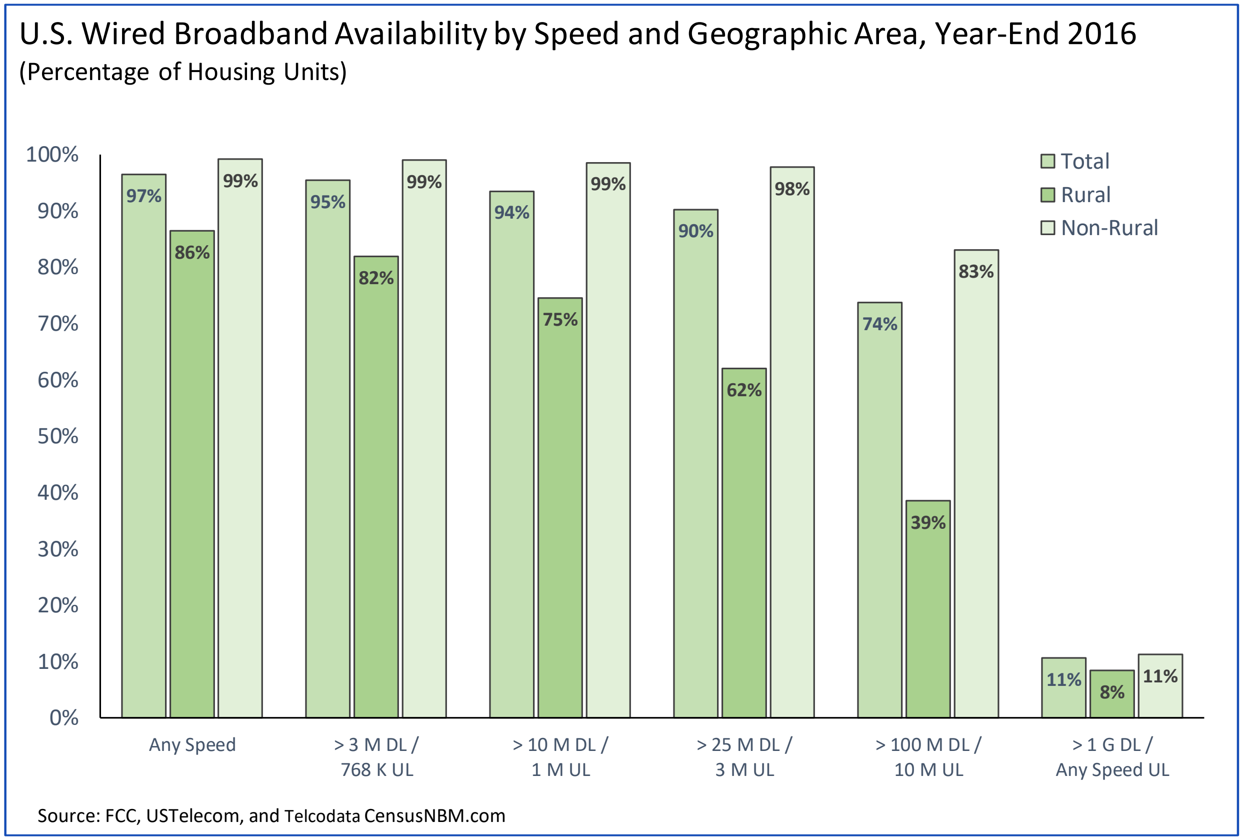


U.S. Investment Has Yielded More Competitive Choice than Europe



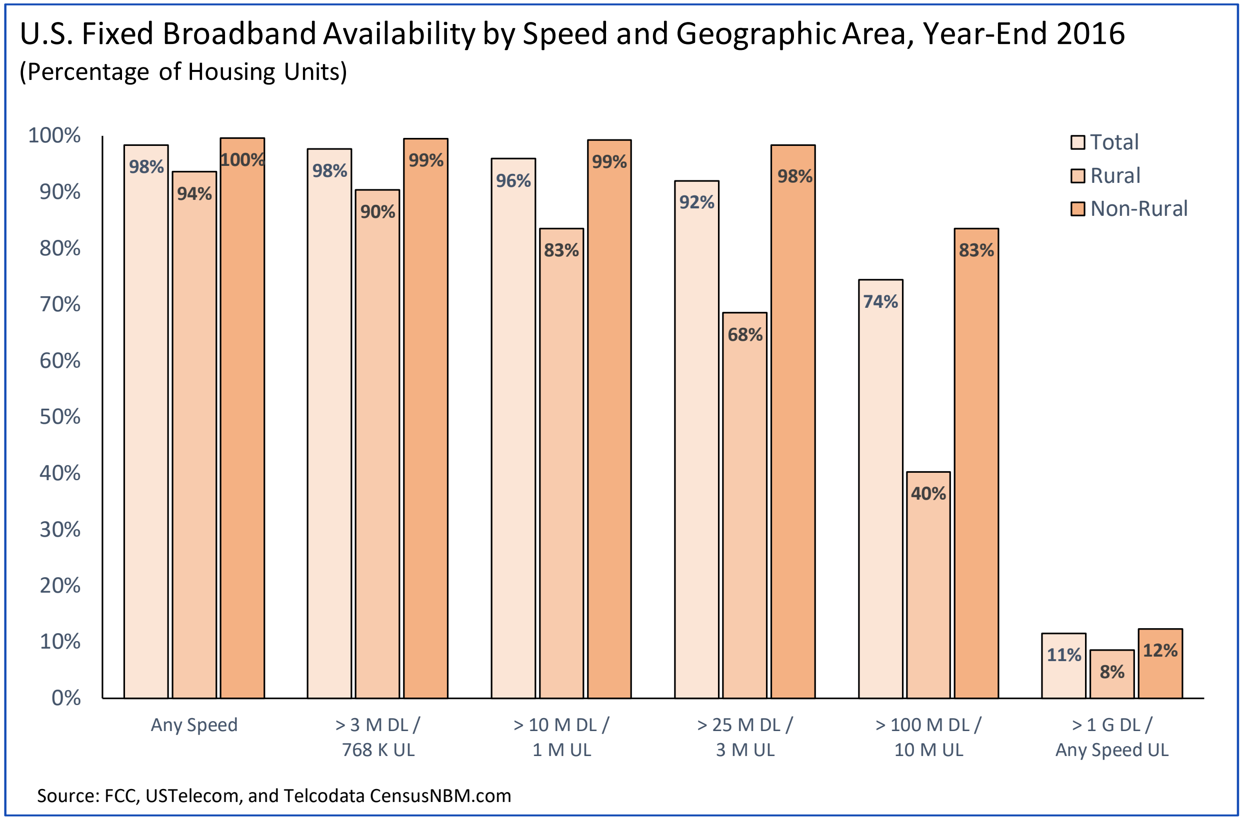


Broadband Gaps Remain in High-Cost Rural Areas



USTelecom supports direct, non-duplicative government support to broadband providers as the most economically and administratively efficient way to close broadband gaps

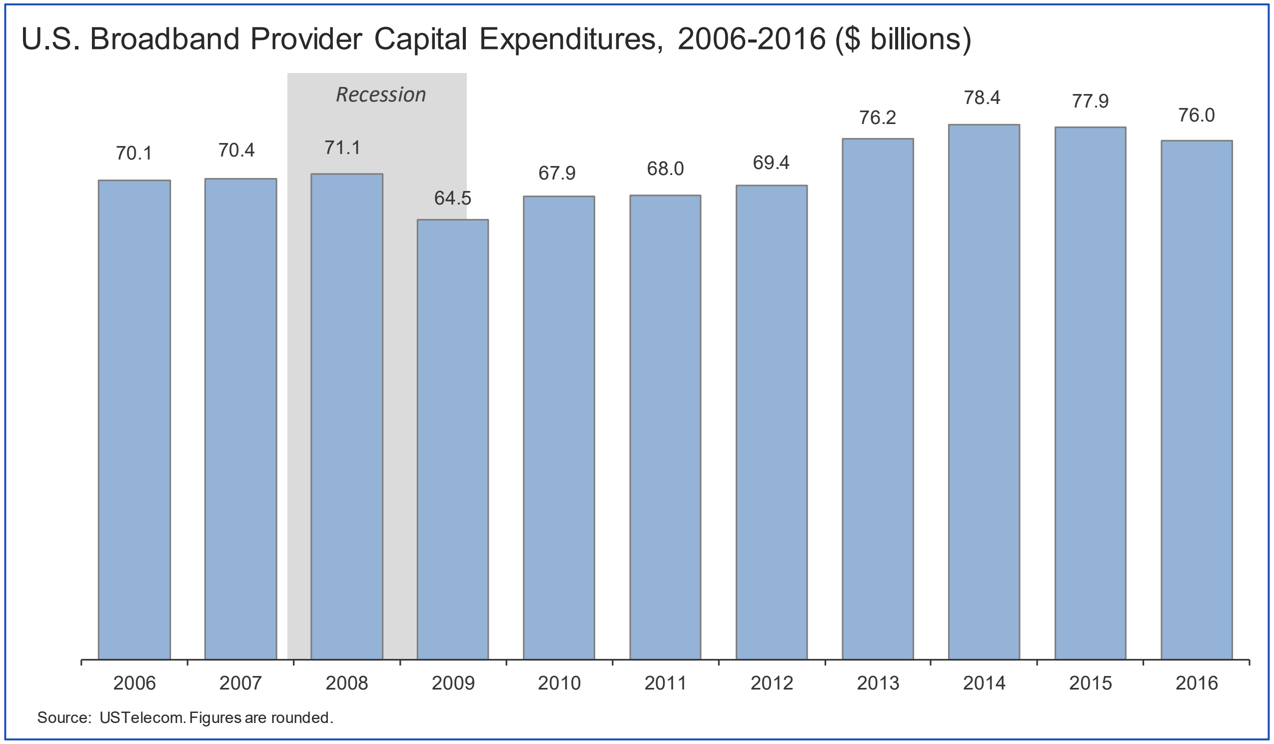
Fixed Wireless Eliminates Some Rural Coverage Gaps



These data include fixed terrestrial wireless

USTelecom supports flexible, cost-effective policies that do not impose rigid technology and speed requirements

Broadband Capital Expenditures Declined in 2015 Coinciding with Heavy Title II Regulation

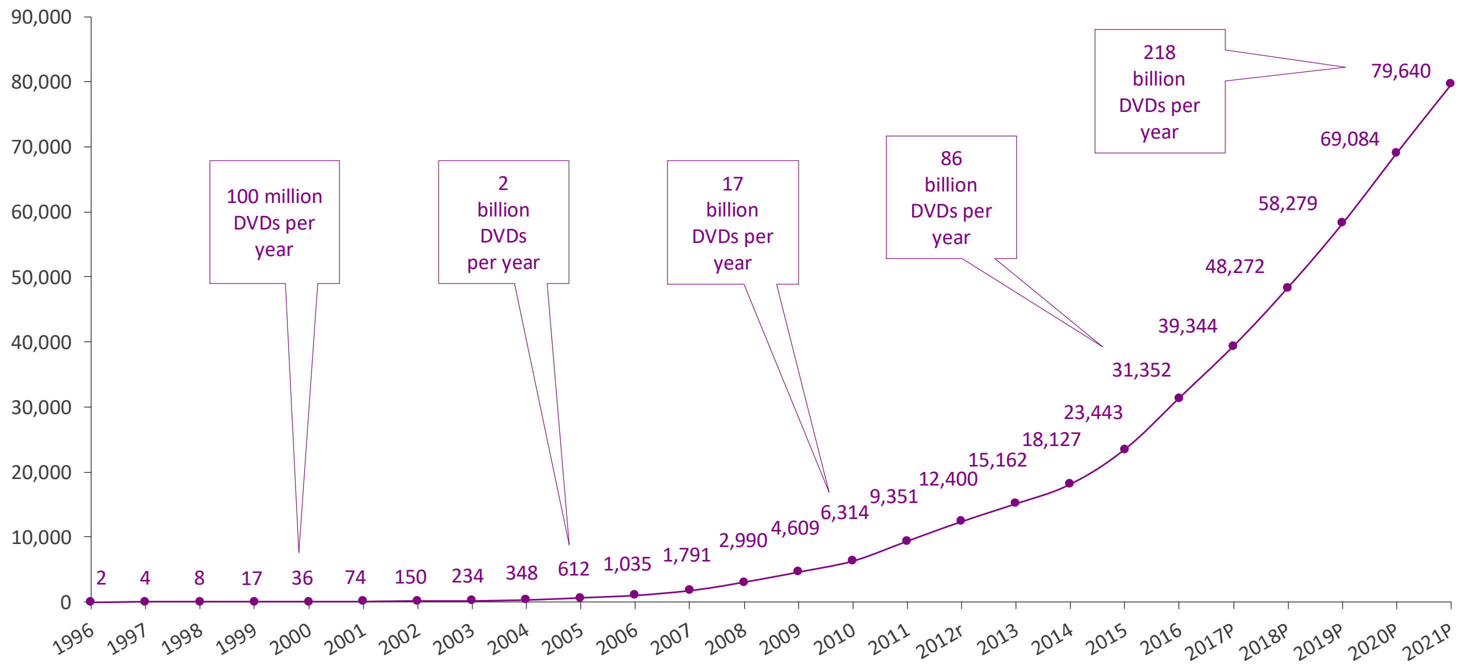


Addressing rural broadband gaps and maintaining international leadership will require increased broadband investment under an even-handed, light-touch regulatory framework

Internet Traffic Growth and Drivers

Internet Protocol Traffic Continues Rapid Growth

Estimated U.S. Internet Protocol Traffic, 1996-2021 (Petabytes per Month and Annualized DVD Equivalent)

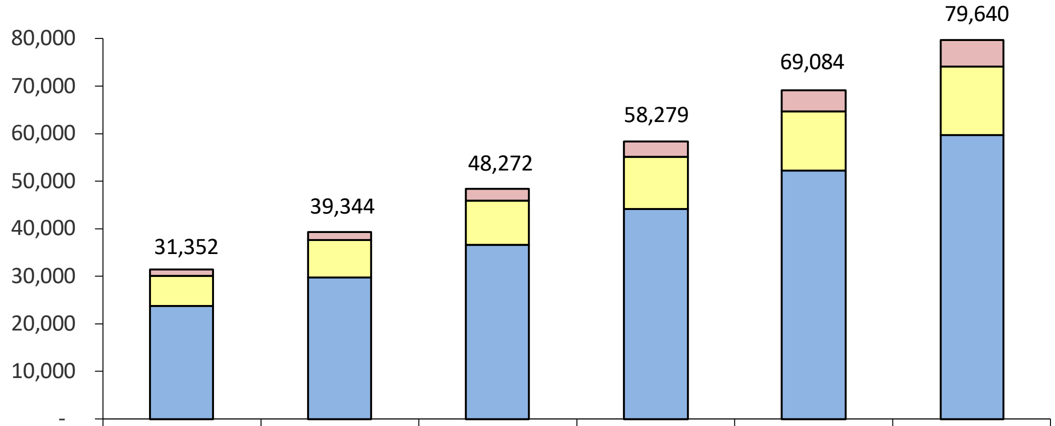


Source: Cisco Visual Networking Index and USTelecom Analysis. DVD equivalents are annualized, rounded, and assumed to store a two-hour movie. The 2012 figure is revised from previously reported volumes based on Cisco VNI statements and is a rounded estimate.

U.S. IP traffic is projected to grow 2.5x in the next five years

Video is the Biggest Driver of IP Traffic

U.S. Internet Protocol Traffic, 2016-2021 (Petabytes per Month)

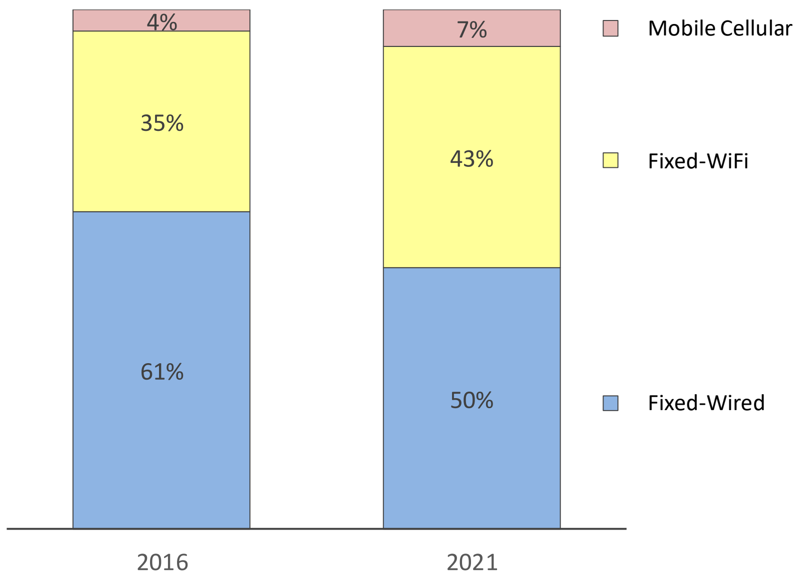


	2016	2017	2018	2019	2020	2021
Mobile	1,322	1,819	2,475	3,306	4,346	5,644
Fixed Consumer Data and Business	6,315	7,809	9,260	10,870	12,582	14,362
Fixed Consumer Video	23,715	29,716	36,537	44,104	52,157	59,634
Total	31,352	39,344	48,272	58,279	69,084	79,640

Source: Cisco Visual Networking Index and USTelecom analysis. Mobile and business include video; consumer data includes all consumer non-video.

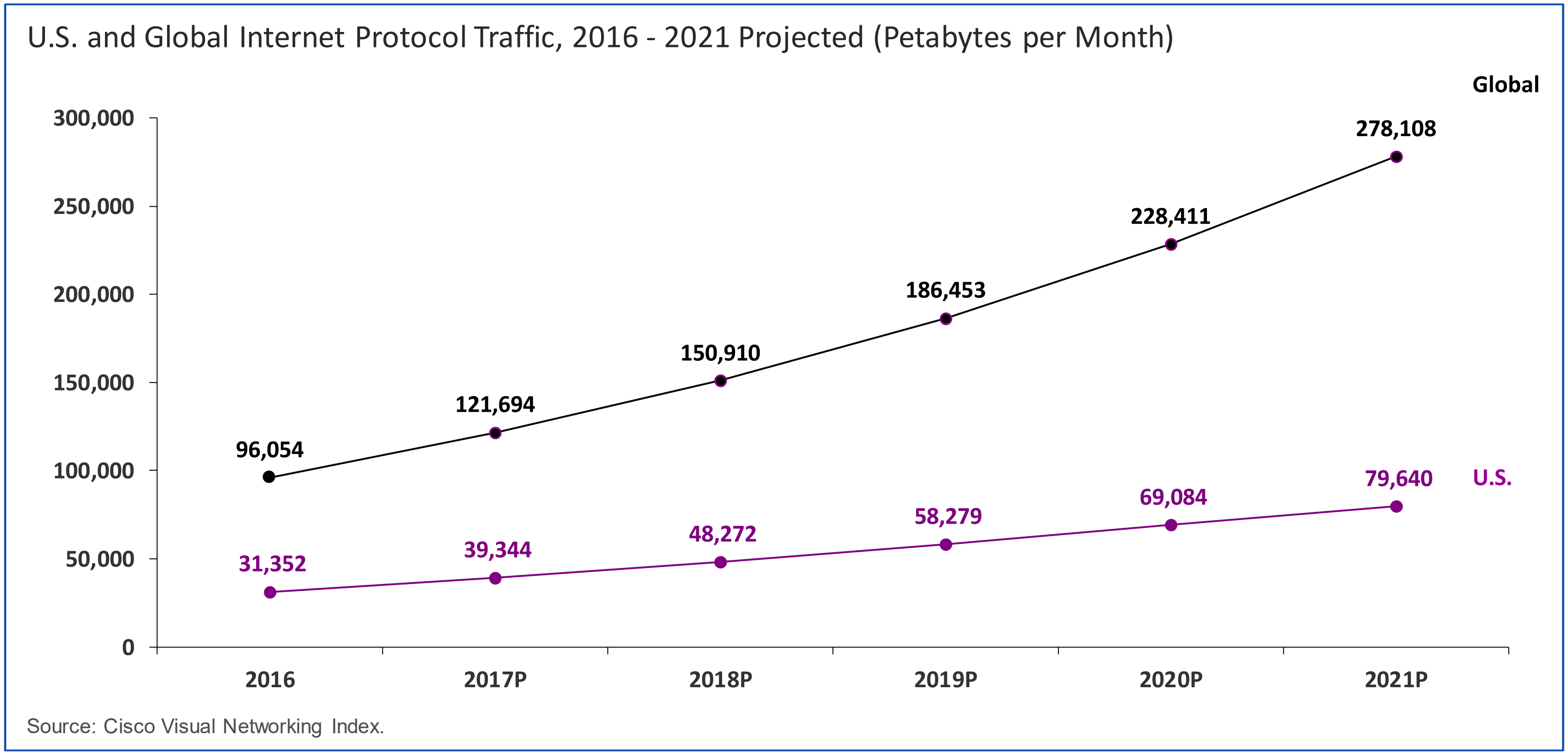
Mobile and Wi-Fi Are Growing but Fixed Networks Remain Essential for All Traffic

Percent Share of U.S. IP Traffic, 2016 and 2021 Projected



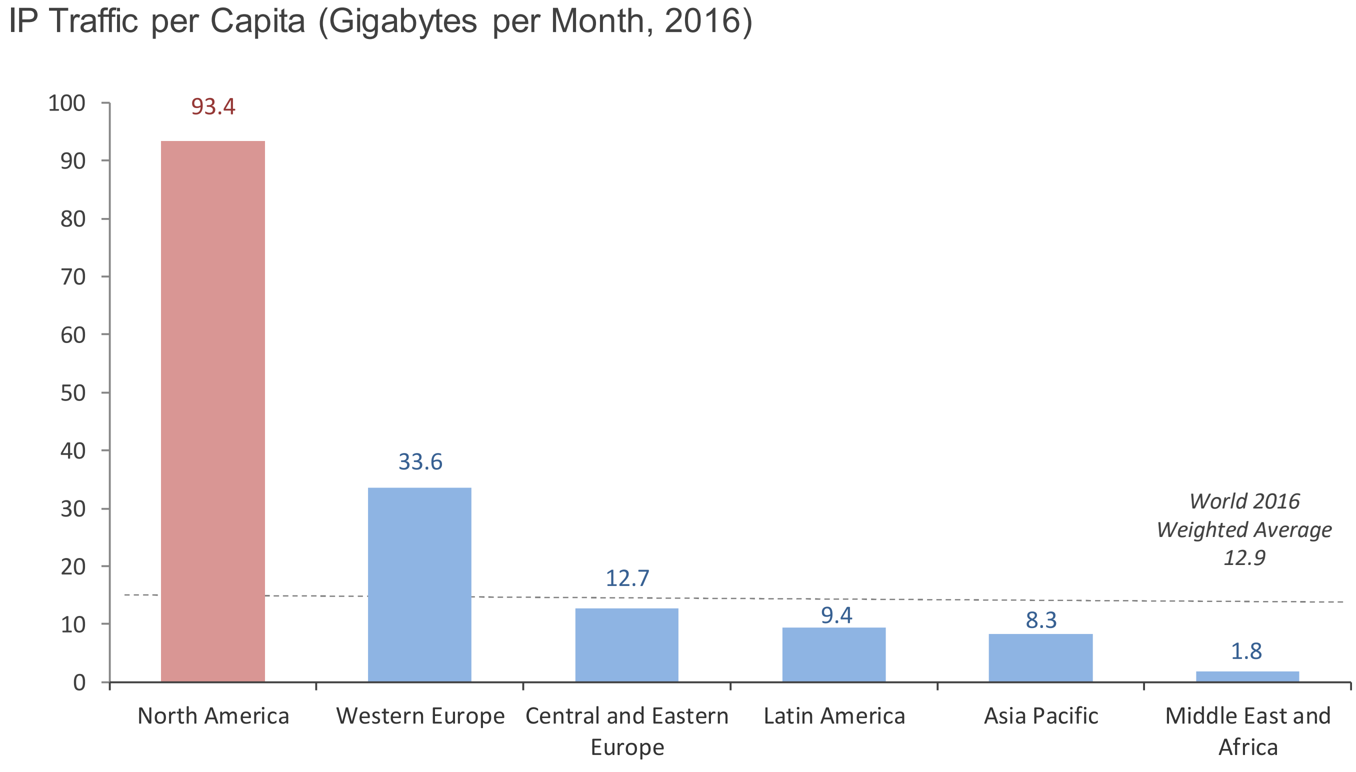
Source: Cisco Visual Networking Index

The U.S. Is a Global Leader in IP Traffic



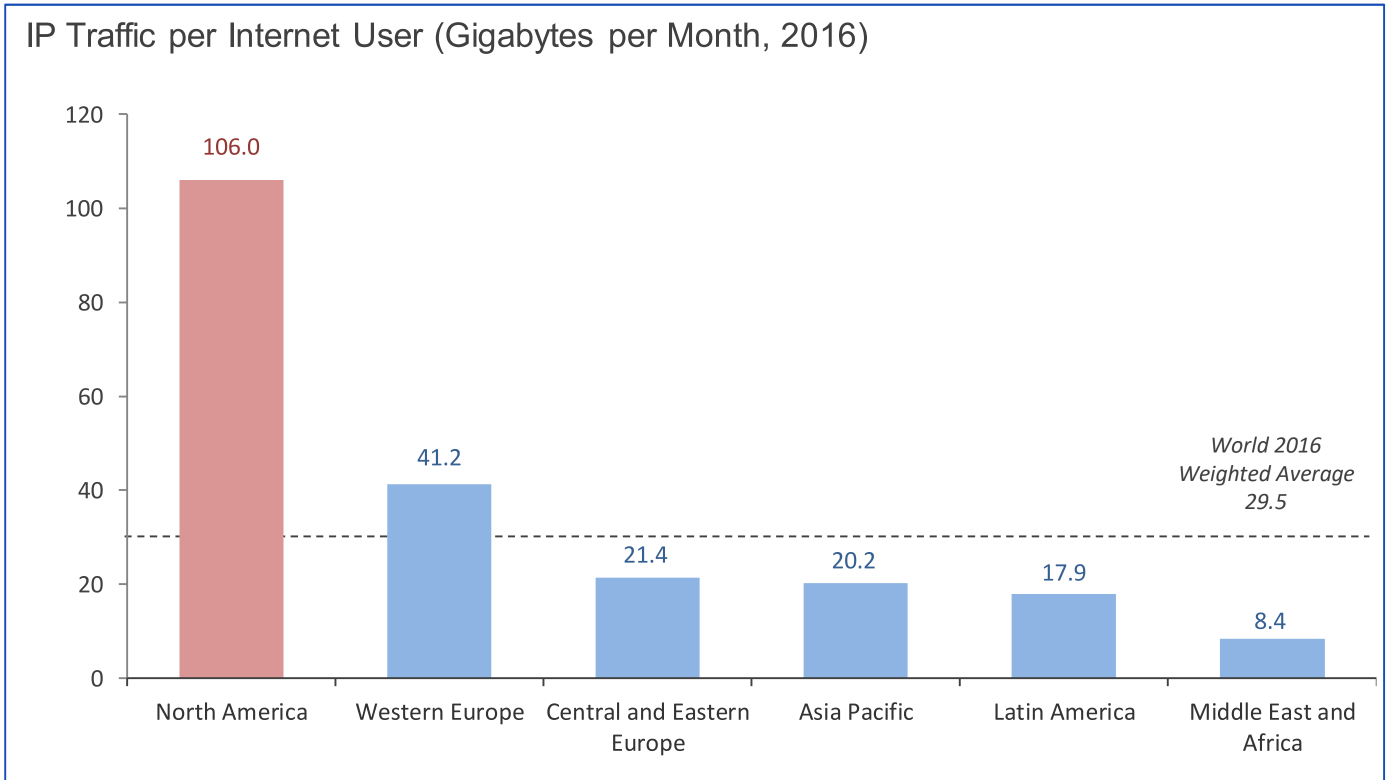
The U.S. is home to 4.4% of the world's population, but it generates nearly one-third of global IP traffic

North America Leads in IP Traffic per Capita



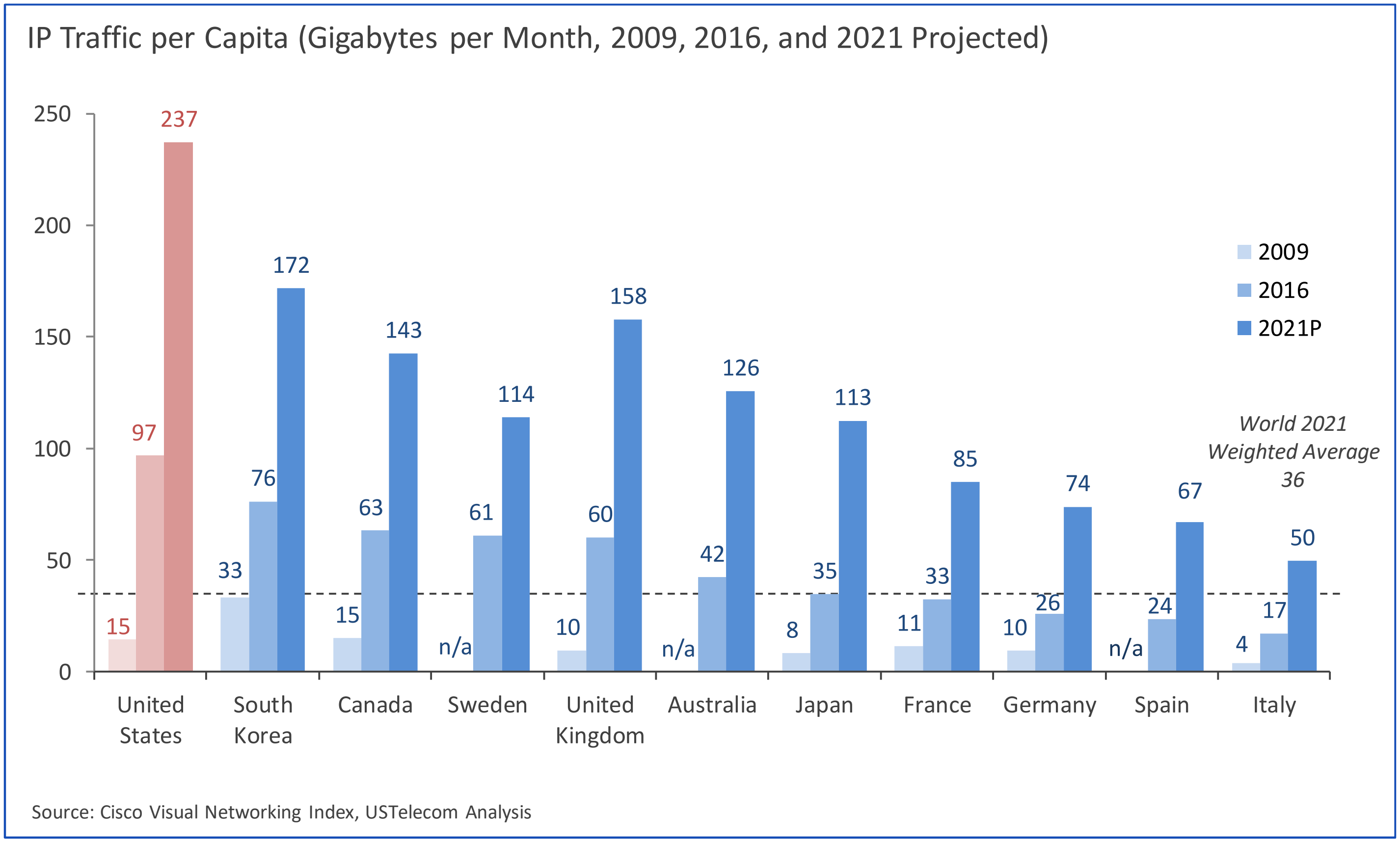
Source: Cisco Visual Networking Index (VNI), USTelecom Analysis

North America Leads in IP Traffic per User

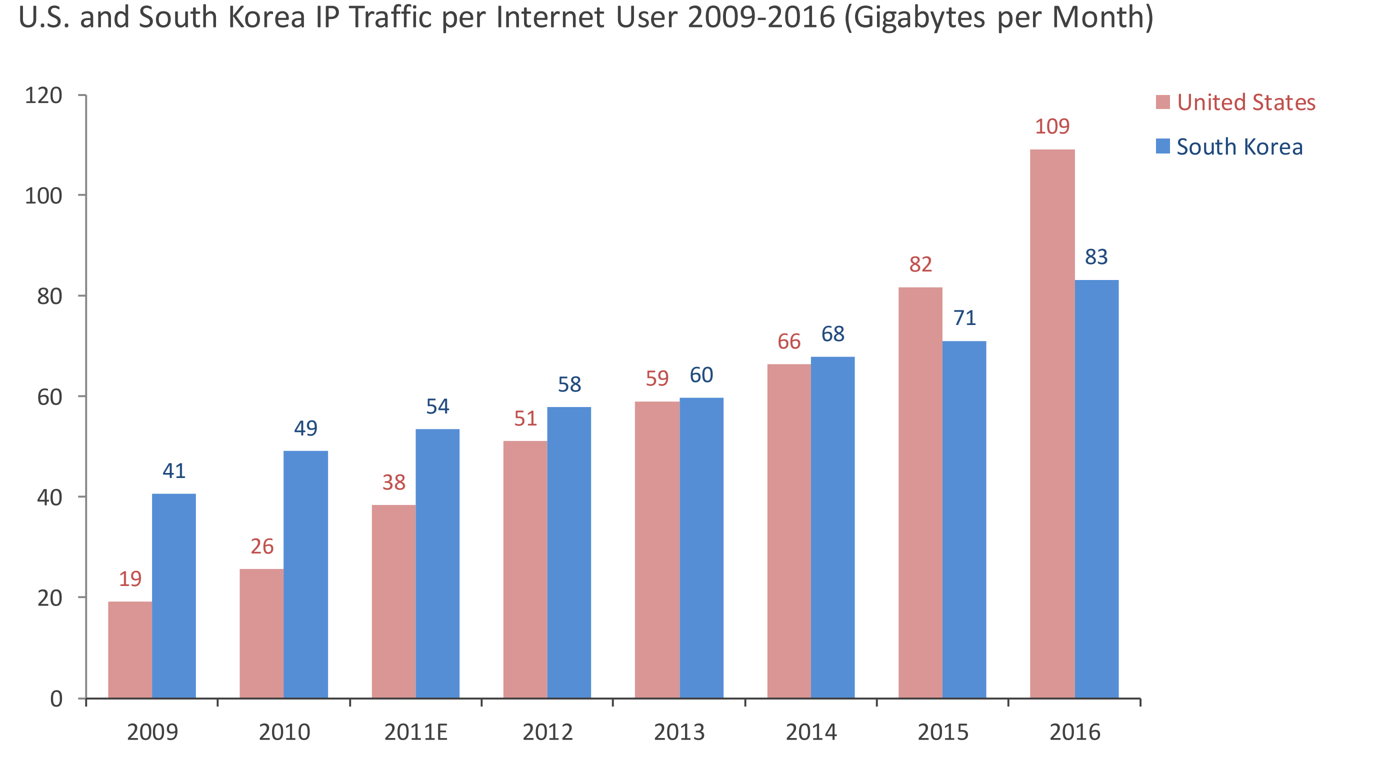


Source: Cisco Visual Networking Index (VNI), USTelecom Analysis

The U.S. Leads Other Industrialized Nations in IP Traffic per Internet User



The U.S. Has Surpassed Former Leader South Korea and Now Leads the World in Internet Traffic per User



Source: Cisco Visual Networking Index, USTelecom Analysis. USTelecom did not collect data for 2011. The 2011 estimatre is the 2010-2012 midpoint.

Where Are We Headed?

- Continued migration of analog world online, from video to the Internet of Things
- Rationalization of networks
  - More fiber closer to network end-points for efficient multi-purpose use
  - Dynamic, software-based network operation and management
- Convergence of wireline and wireless with fiber and 5G
  - Cloud migrating closer to the user
  - Network functions migrating back to the data center
  - Lower latency as well as higher speeds
  - New forms of competition
- New networked applications
  - The usual suspects: autonomous vehicles, artificial intelligence, augmented reality/virtual, big data analytics, the Industrial Internet, the Internet of Things, smart cities, telemedicine
  - The unknown …

Additional USTelecom Industry Analysis Resources

- USTelecom Research Brief: *U.S. Broadband Availability Year-End 2016* (February 22, 2018)
- USTelecom Research Brief: *U.S. Internet Usage and Global Leadership Are Expanding* (November 27, 2017)
- USTelecom Research Brief: *Broadband Investment Continued Trending Down in 2016* (October 31, 2017)
- USTelecom Blog: *Achieving the Promise of Fiber-Enabled 5G Networks* (October 27, 2017)
- USTelecom Research Brief: *U.S. Broadband Availability Mid-2016* (August 25, 2017)

SESSION 8: STATE-OF-THE-ART INFRASTRUCTURE

Wharton
UNIVERSITY of PENNSYLVANIA

ALTERNATIVE INVESTMENTS
Initiative

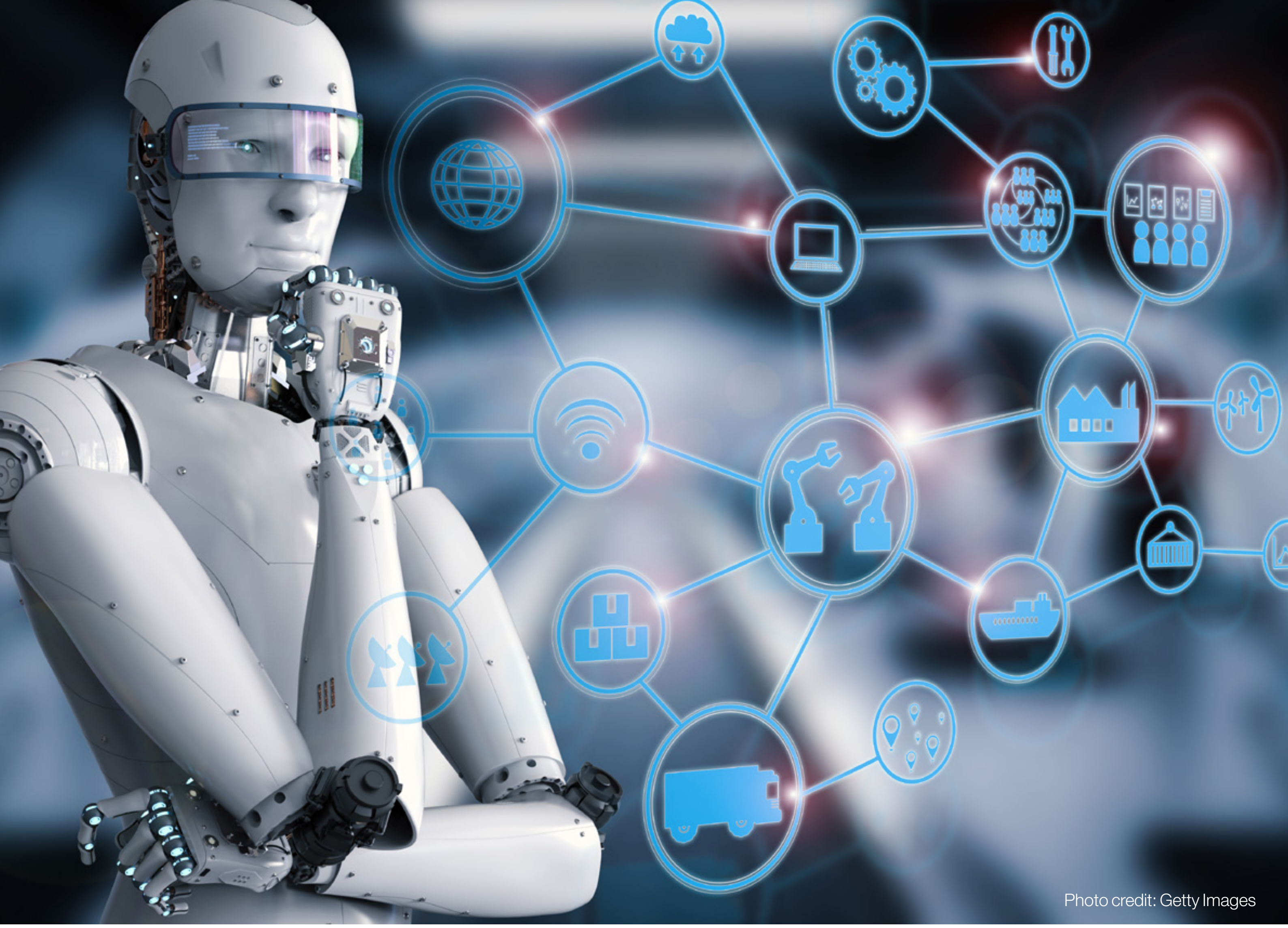


Photo credit: Getty Images

Artificial intelligence: Construction technology's next frontier

Engineering and construction is behind the curve in implementing artificial intelligence solutions. Based on extensive research, we survey applications and algorithms to help bridge the technology gap.

Jose Luis Blanco
Partner, Philadelphia
McKinsey & Company

Steffen Fuchs
Partner, Dallas
McKinsey & Company

Matt Parsons
Partner, Philadelphia
McKinsey & Company

Maria Joao Ribeirinho
Partner, Madrid
McKinsey & Company

The engineering and construction (E&C) sector is worth more than $10 trillion a year. And while its customers are increasingly sophisticated, it remains severely underdigitized. To lay out the landscape of technology, we conducted a comprehensive study of current and potential use cases in every stage of E&C, from design to preconstruction to construction to operations and asset management.[1] Our research revealed a growing focus on technological solutions that incorporate artificial intelligence (AI)-powered algorithms. These emerging technologies focus on helping players overcome some of the E&C industry's greatest challenges, including cost and schedule overruns and safety concerns.

In the immediate future, we expect AI's proliferation in the E&C sector to be modest. Indeed, despite proven high return on investment (ROI) and widespread management interest in AI solutions, few E&C firms or owners currently have the capabilities—including the personnel, processes, and tools—to implement them.[2]

However, a shift is coming. Stakeholders across the project lifecycle—including contractors, operators, owners, and service providers—can no longer afford to conceive of AI as technology that's pertinent only to other industries. Indeed, adjacent industries, such as transportation and manufacturing, are already in the process of breaking down the barriers between one another and operating more as ecosystems (for example, solutions, tools, and algorithms that were industry-specific are more likely to become effective having impact across industries)—increasing the threat of competition from market entrants that have not traditionally been capital project players.[3]

These lowered market barriers are compounded by the increasing ability of AI methods to work across industries. These advances will be seen in the mid- to long-term, but to play a role in future ecosystems—and to compete with incoming market entrants—E&C will need to catch up in its adoption of AI applications and techniques. We predict this effort will lead to the allocation of more resources to build the necessary capabilities, and to AI playing a more significant role in construction in the coming years.

So where should E&C leaders begin? Building on last year's report, we offer predictions for where and how AI can infiltrate construction across three categories:

- Examining where AI solutions are beginning to emerge in construction today.
- Exploring AI-powered applications and use cases that have already made an impact in other sectors and that can be applied in the construction industry.
- Assessing additional machine learning algorithms and their potential E&C applications.

1 For more information, see Jose Luis Blanco, Andrew Mullin, Kaustubh Pandya, and Mukund Sridhar, "The new age of engineering and construction technology," July 2017, McKinsey.com.

2 For more information, see "Reinventing construction through a productivity revolution," McKinsey Global Institute, February 2017, McKinsey.com.

3 For an example of the impact platforms and ecosystems will have on industries, see Tanguy Catlin, Johannes-Tobias Lorenz, Jahnavi Nandan, Shirish Sharma, and Andreas Waschto, "Insurance beyond digital: The rise of ecosystems and platforms," January 2018, McKinsey.com.

The current state of AI in engineering and construction

AI use cases in construction are still relatively nascent, though a narrow set of start-ups are gaining market traction and attention for their AI-focused approaches. There are a few early-stage examples construction firms can evaluate:

- Project schedule optimizers can consider millions of alternatives for project delivery and continuously enhance overall project planning.

- Image recognition and classification can assess video data collected on work sites to identify unsafe worker behavior and aggregate this data to inform future training and education priorities.

- Enhanced analytics platforms can collect and analyze data from sensors to understand signals and patterns to deploy real-time solutions, cut costs, prioritize preventative maintenance, and prevent unplanned downtime.

Still, adoption of AI solutions is quite low in E&C, particularly compared with other industries (Exhibit 1). McKinsey research compared building materials and construction to 12 other industries; ten of those industries are further along in current AI adoption, and all 12 are projected to increase spending on AI at a faster pace over the next three years.[4]

Of course, any AI algorithm is based on learning from the past. This means that AI needs a certain critical mass of data to deliver on its promise so scale will matter; as such, firms will need a significant amount of data (in this case projects) to train an AI algorithm. Therefore, the largest companies are likely to benefit more, particularly in the short term.

It is possible that an external third party enters and leverages E&C data to train its models—a scenario that would likely result in improvement across the industry as a whole but limited competitive advantage for individual firms—but this seems unlikely given the enormous restrictions on data sharing and data ownership.

Five AI-powered applications from other industries transferrable to construction

AI encompasses a large universe of possibilities and use cases, including machine learning, natural language processing, and robotics. Our research has homed in on five AI applications used in other industries that have direct application in the construction sector:

Transportation route optimization algorithms for project planning optimization.

Currently available technology already offers transportation companies the ability to optimize routes and improve traffic navigation. In the future an AI technique called reinforcement learning, which allows algorithms to learn based on trial and error, could provide even more

4 Michael Chui, James Manyika, and Mehdi Miremadi, "What AI can and can't do (yet) for your business," McKinsey Quarterly, January 2018, McKinsey.com.

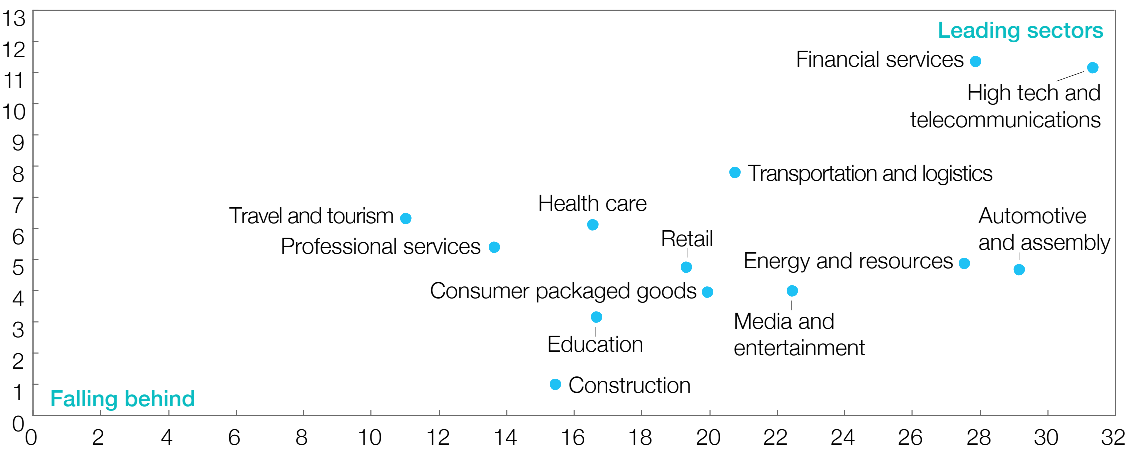
effective optimization as well as solve for objective functions (e.g. duration or cost of fuel).[5] Such technology could be directly applicable to E&C project planning and scheduling, as it has the potential to assess endless combinations and alternatives based on similar projects, optimizing the best path and correcting themselves over time.

Pharmaceutical outcomes prediction for constructability issues.
The pharmaceutical industry has emerged as a leader in investing its large R&D budgets into predictive AI solutions, which lower R&D costs in the long run, chiefly by forecasting medical trial outcomes. These applications can be directly applied to the construction industry—particularly in major projects with R&D budgets as large as those of Big Pharma—in two ways to forecast outcomes. First, predictive applications can forecast project risks, constructability, and the structural stability of various technical solutions, providing insight during the decision-making phase and potentially saving millions of dollars down the road. And second, these applications can enable testing of various materials, limiting the downtime of certain structures during inspection.

Exhibit 1

Sectors leading in AI adoption today also intend to grow their investment the most

Future AI demand trajectory[1]
Average estimated % change in AI spending, next 3 years, weighted by firm size[2]



Current AI adoption
% of firms adopting one or more AI technology at scale or in a core part of their business, weighted by firm size[2]

1 Based on the midpoint of the range selected by the survey respondent.
2 Results are weighted by firm size. See Appendix for an explanation of the weighting methodology.
Source: Michael Chui, James Manyika, and Mehdi Miremadi, "What AI can and can't do (yet) for your business," *McKinsey Quarterly*, January 2018, McKinsey.com

5 For further reading on reinforcement learning, see Michael Chui, James Manyika, and Mehdi Miremadi, "What AI can and can't do (yet) for your business," *McKinsey Quarterly*, January 2018, McKinsey.com.

Retail supply chain optimization for materials and inventory management.

AI has changed the game for the retail supply chain by reducing manufacturing downtime, reducing oversupply, and increasing predictability of shipments—all resulting in impressive reductions in costs, logistical burdens, and variability. Supervised learning applications (e.g., gradient-boosting trees[6]) will become directly applicable to E&C as modularization and prefabrication become more prevalent. More projects are using off-site construction for large quantities of materials, and the need for enhanced supply chain coordination will become critical to control costs and overall cash flows.

Robotics for modular or prefabrication construction and 3-D printing.

While use of modularization and 3-D printing is advancing in construction today, there could be a longer-term opportunity to maximize the benefits of these approaches through machine learning. For example, robotics industry researchers have successfully trained robotic arms to move by learning from simulations.[7] In E&C, this application might someday be applied to prefabrication techniques and maintenance operations for oil and gas as well as other industrial sectors.[8]

Healthcare image recognition for risk and safety management.

In the healthcare industry, machine-learning methods are creating breakthroughs in image recognition to support the diagnosis of illnesses (e.g., detecting known markers for various conditions). Down the road, this technology could be applied to drone imagery and 3-D-generated models to assess issues with quality control, such as defects in execution (both structural and aesthetic) and early detection of critical events (e.g., bridge failure). These techniques could help engineers compare developing and final products against initial designs, or train an unsafe-behaviors detection algorithm to identify safety risks in project sites based on millions of drone-collected images.

Additional machine learning algorithms with potential to disrupt E&C

The number of AI solutions applicable to E&C are potentially endless. To scratch the surface, we offer a focused look at a few of the possibilities in machine learning (Exhibit 2).[9] While machine learning is but one branch of AI, its breadth of supervised and unsupervised learning techniques, as well as deep learning convolutional and recurrent neural networks, offer myriad business cases for investment.

Several use cases will be applicable across the broad spectrum of E&C stakeholders, including owners, contractors, and operators:

6 "Gradient boosting" is a powerful, predictive machine learning technique that enables the assessment of many weak hypotheses to build a more accurate prediction.
7 Chui, Manyika, Miremadi, "What AI can and can't do."
8 *Ibid.*
9 For further information on each of these techniques, see Michael Chui, Vishnu Kamalnath, and Brian McCarthy, "An executive's guide to AI," accessed March 9, 2018, McKinsey.com.

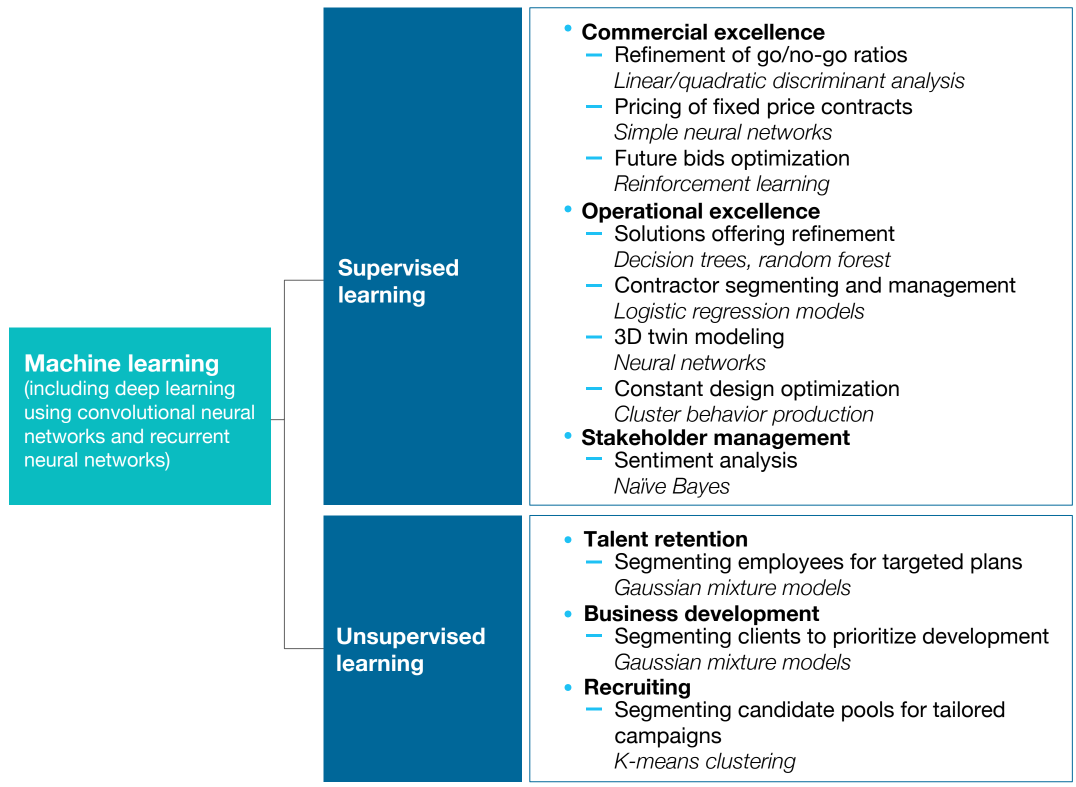
Refining quality control and claims management.

Firms can use deep-learning techniques to enhance quality control. Neural networks can, for example, assess drone-collected images to compare construction defects against existing drawings. These networks are also capable of helping owners and firms alike understand the likelihood that a contractor or subcontractor will file a claim, enabling owners and firms to proactively allocate contingencies and deploy targeted mitigation plans.

Increasing talent retention and development.

One major challenge the E&C industry will face over the coming years is attracting and retaining top talent. Leaders can tackle this issue by applying both unsupervised machine learning algorithms such as Gaussian mixture models, which can segment employees based on likelihood of attrition, and developing targeted plans to retain them. K-means clustering can identify potential candidate pools and tailor recruiting strategies to attract the right talent. AI algorithms can also help leaders locate and predict overarching talent pain points such as turnover, skill or labor shortages, and flaws in organizational design. For example, it might help forecast labor shortages for skilled craft in specific geographies, or plan for hiring or locking contracts to limit costs or project delays.

Exhibit 2 **Artificial intelligence and example business applications**



McKinsey&Company

Boosting project monitoring and risk management.

E&C stakeholders can use neural networks, using drone-generated images and laser generated data capturing project progress, to teach an AI how to create 3-D "twin models" to match BIM-generated models. These applications would dramatically reduce decision-making cycles in a construction project from a monthly basis to a daily basis—through full automation of the project scheduling and budgeting update on the combination of BIM, AI, drone, and laser capabilities.

Constant design optimization.

Owners and contractors can employ a recommender system approach (supervised learning) that uses cluster behavior production to identify the important data necessary for making a recommendation. These applications can recommend to engineers and architects the use of a specific design, such a structural solution (for example, type of connections—welded or bolted) or an architectural finishes (for example, curtain walls vs window walls) based on various criteria (for example, total cost of ownership, timeline to complete execution, likelihood of defective constructions-mistakes during execution). The end result is that owners and contractors have more information with which to make an informed decision.

Several other applications have a specific use case for E&C contracting firms:

Building commercial excellence and a competitive edge.

By assessing previous project bids and replicating elements of the successes while avoiding elements of the failures, supervised and unsupervised learning algorithms can boost an E&C firm's project win rate, enhance margins, and ensure project value. Linear/quadratic discriminant algorithms, for example, can enhance a firm's forecasting ability to estimate a lead's likelihood of being accepted (i.e. go/no-go ratio) and likelihood of closing (i.e. get/no-get ratio). Simple neural network algorithms can be used to assess the rates or lump-sum price discounts clients may be willing to pay for a project, while in the future, reinforcement learning could help optimize bids and designs based on prior successful bid decisions. These algorithms can also predict what combination of services might be most attractive to clients, particularly as firms move toward offering integrated solutions rather than traditional one-off projects.

Firm reputation and risk management.

Given the recent wave of earnings misses and project write-offs in the E&C industry, the confidence of the market and individual clients in a given firm's ability to meet commitments has dropped. Because of this shift, firms are losing project bids and the market is penalizing stock prices. Firms can apply machine learning to rapidly address market and client concerns. For example, Naïve Bayes algorithms can be employed to perform sentiment analysis on a firm's market perception and inform the launch of targeted, reputation-building efforts needed to preserve its backlog and stock price. Algorithms can also be used to profile customers based on their characteristics and desires to better target business development efforts and improve retention.

What leaders can do to get ahead of the curve and take advantage of AI

There are several steps that all stakeholders can take to get ahead of the curve in AI:

Identify high-impact use cases based on a firm's starting points.

Firms need to identify the areas of major need and what AI-powered use cases can have the most impact in the short term. Without a clear business case, ROI, and burning platform, E&C firms will be inefficient in the use of time and resources, which can create frustration, increase skepticism in the organization, and cause firms to lose momentum. Leaders should prioritize their investments based on the areas where AI can have the most impact on the firm's unique situation and need—for example, safety or talent retention—and where it will be easiest to implement in the firm's current stage of digital maturity.

Dedicate a significant portion of R&D investment to digital capabilities immediately.

Today, the E&C industry is investing roughly 1 percent overall into technology—a significantly smaller proportion than other industries, such as financial services and manufacturing. Because the impact of AI is contingent on having the right data, E&C leaders cannot take advantage of AI without first undertaking sustained digitization efforts. This includes investing in the right tools and capabilities for data collection and processing, such as cloud infrastructure and advanced analytics. McKinsey research finds that companies with a strong track record of digitization are 50 percent more likely to generate profit from using AI.

Embrace the ecosystem concept and understand solutions from other industries.

For too long, the E&C sector has operated within a vacuum. Given the move toward ecosystems discussed above, industry insiders need to look beyond sector borders to understand where incumbents are becoming more vulnerable and to identify white space for growth. Both owners and E&C firms can explore nontraditional partnerships with organizations outside the industry to pool advanced R&D efforts that have multiple applications across industries (for example, start-ups, universities, or even major players in other sectors where AI is more evolved). For E&C firms that can pursue unsolicited bids or real-estate development, such partnerships could be a way to increase data points and generate value. In addition, owners and firms can ensure corporate development teams have the talent and topical expertise to assess potential technologies with the entire ecosystem in mind.

Adapt the talent capabilities of the company.

The industry will need to reverse its trend of underinvesting in developing talent and place significant focus on hiring people from other industries with backgrounds and skill sets in AI and digital technologies. In addition, firms will need to reskill their current workforces to acquire the necessary capabilities to thrive in the digital age and provide training in necessary concepts, such as machine learning algorithms.

Change internal processes to accommodate the innovation that AI will bring.

Today, the processes critical to actualizing AI solutions—such as how to propose and implement a new idea—are handled several levels below the CEO. But top leadership needs to be involved in developing these processes and bolstering employees' flexibility to innovate. While seemingly a simple step to take, ensuring the C-suite is influencing process development is a key enabler of preparing to embrace AI.

First movers and fast followers will be rewarded

The concrete steps outlined above can serve as an immediate starting point for firms to pursue AI. Indeed, early movers will set the direction of the industry and reap both short- and long-term benefits. Though E&C tends to lag behind by measure of technology adoption, now is the time for owners and firms to act and secure their places at the vanguard of pulling AI applications and techniques into the sector.