The New Infrastructure Investment and Jobs Act

More Tailwinds for Transmission Investment and Opportunities for Public Power and Cooperatives

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MCR estimates that MISO & SPP could see incremental average annual transmission investment of approximately $410 million and $270 million, respectively.

Transmission investment has been consistently strong across the country for many years. EEI reports that nationwide annual transmission investment for IOUs and Transcos rose from $15.6 billion in 2012 to a projected $27.1 billion in 2021,[1] or an average growth rate of 6.3% per year, well above the average annual inflation rate of 2.1% over the same period. The level of investment growth has been even higher for some RTOs.[2] Despite the high levels of transmission investment, the recently passed $1.2 trillion Infrastructure Investment and Jobs Act ("Infrastructure Act") includes funding and programs designed to crank up grid transmission and distribution investment even higher, particularly when it comes to promoting interregional and interstate transmission. The Infrastructure Act provides potentially strong tailwinds for future transmission investment, with $27 billion[3] in grid and cybersecurity investment from 2022-2026 that could be significant when compared to many utilities' current transmission investment levels. Assuming the total funding is allocated two-thirds transmission and one-third distribution,[4] 90% capital and 10% expenses, evenly spread across the five years and evenly allocated across the country,[5] we estimate on a magnitude basis that MISO and SPP could see incremental average annual transmission investment of approximately $410 million and $270 million, respectively. Thus, MISO's estimated annual allocation in this scenario would be about 11% of its current annual total transmission investment of $3.9 billion. SPP's estimated annual allocation would be 31% of its total annual

[1] Sources: Edison Electric Institute Business Analytics Group, November 2020; Edison Electric Institute Economics, Statistics and Industry Research Group, October 2018.

[2] For example, MCR reports that MISO's total gross transmission plant of all TOs increased by 7.2% in 2021. See MCR white paper, *MISO Transmission Rates in Joint Zones, Will the Transmission Rate Express Train Continue?,* November 2021.

[3] Excludes Bonneville Power Authority, which is separately allocated $10 billion of infrastructure spending.

[4] The law defines a power line to be either transmission or distribution.

[5] Based on MCR estimated allocation using peak loads and line miles. Excludes Bonneville Power Authority.

investment of $879 million. There will naturally be a ramp-up of funds used over the next few years, recognizing the long lead time associated with many new transmission projects. It is unclear, however, whether all this spending will be truly incremental as some of the Act's funding could end up being used for projects not yet designed but would have happened anyway, given the profitable nature of transmission investment. Nonetheless, if a small public power or cooperative utility happens to be the recipient of a grant or loan that prompts additional transmission investment, the impact could be a significant (albeit temporary) bump up in investment for that particular transmission owner ("TO").[6]

The Infrastructure Act is very broad, but with regards to transmission and distribution, it provides about $27 billion in new loans and grants for the electric grid under Title 1 Grid Infrastructure and Resiliency (see table 1 on the next page) while also providing some language to bolster the Federal Power Act. Title 1 of the Infrastructure Act is designed to make the grid more resilient to the impacts of climate change and cyber-attacks; and to protect against droughts, heat, floods, and wildfires. More specifically, the Infrastructure Act's key transmission-related elements do the following:

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1. **Provide grid-hardening DOE grants.**[7] A $5 billion allotment is split evenly between grants given directly to eligible entities[8] and grants issued to states and Indian tribes. For direct grants to eligible companies, the Department of Energy ("DOE") must ensure that at least 30 percent of the grant amounts go to eligible entities that sell not more than 4,000,000 MWh of electricity per year. These smaller utilities must match one-third of their approved amount. Grants to entities greater than 4,000,000 MWh must be 100% matched. Grants to states and Indian tribes (rather than directly to companies) must be matched by the state or Indian tribe with 15 percent of the amount of the award. Further, the states must ensure the grants to small utilities less than 4,000,000 MWh are allocated at least consistent with their percentage of customers. The grants can be used for projects that reduce the likelihood of disruptive events[9] such as:

   - Supplementing the existing hardening efforts of the eligible entity planned for any given year; and
   - Reducing the risk of any power lines owned or operated by the eligible entity causing a wildfire; or

[6] Keep in mind that a grant would not be recoverable in rates, but that grant could represent just a portion of the total project investment and grants require the utility to match a portion of the grant.

[7] A grant awarded to an eligible entity under the program may be used for activities, technologies, equipment, and hardening measures to reduce the likelihood and consequences of disruptive events, including— (A) weatherization technologies and equipment; (B) fire-resistant technologies and fire prevention systems; (C) monitoring and control technologies; (D) the undergrounding of electrical equipment; (E) utility pole management; (F) the relocation of power lines or the reconductoring of power lines with low-sag, advanced conductors; (G) vegetation and fuel-load management; (H) the use or construction of distributed energy resources for enhancing system adaptive capacity during disruptive events, including— (i) microgrids; and (ii) battery-storage subcomponents; (I) adaptive protection technologies; (J) advanced modeling technologies; (K) hardening of power lines, facilities, substations, of other systems; and (L) the replacement of old overhead conductors an underground cables.

[8] An eligible entity can be (A) an electric grid operator; (B) an electricity storage operator; (C) an electricity generator; (D) a transmission owner or operator; (E) a distribution provider; (F) a fuel supplier; and (G) any other relevant entity, as determined by the Secretary of Energy.

[9] An event in which operations of the electric grid are disrupted, preventively shut off, or cannot operate safely due to extreme weather, wildfire, or a natural disaster.

Table 1
Title 1: Grid Infrastructure and Resiliency Funding

Subtitle/Section	Total Funding Level from 2022-2026	Split of Transmission vs. Distribution
Subtitle A Grid Infrastructure Resilience and Reliability		
SEC. 40101. Preventing outages and enhancing the resilience of the electric grid	$ 5,000,000,000	Transmission & Distribution
SEC. 40103 (b). Electric grid reliability and resilience research, development, and demonstration	$ 5,000,000,000	Transmission & Distribution
SEC. 40103 (c). Energy improvement in rural or remote areas (up to 10,000 population)	$ 1,000,000,000	Transmission & Distribution (and Generation)
SEC. 40106. Transmission facilitation program--Borrowings	$ 2,500,000,000	Transmission
SEC. 40106. Transmission facilitation program--Project Costs (recovered in rates)	$ 10,000,000,000	Transmission
SEC. 40107. Deployment of technologies to enhance grid flexibility-- Smart Grid Grants	$ 3,000,000,000	Mostly Distribution
SEC. 366. State energy plans (previously funded)	$ -	Transmission & Distribution (and Generation)
Subtitle B—Cybersecurity		
SEC. 40124. Rural and Municipal Utility Advanced Cybersecurity Grant and Technical Assistance Program	$ 250,000,000	Transmission & Distribution
SEC. 40125. Enhanced grid security	$ 250,000,000	Transmission & Distribution
Total	**$ 27,000,000,000**	

- Increasing the ability of the eligible entity to reduce the likelihood and consequences of disruptive events.

2. **Promote research and development and demonstration for grid reliability and resilience.** Another $5 billion in program funding will be directed towards competitive projects that:

- Demonstrate innovative approaches to transmission, storage, and distribution infrastructure to harden and enhance resilience and reliability; and
- Demonstrate new approaches to enhance regional grid resilience, implemented through states by public and rural electric cooperative entities on a cost-shared basis.

The DOE and the Department of Interior will be able to provide $1 billion of federal financial assistance to rural or remote areas.

3. **Enable federal financial assistance to rural or remote areas.** The DOE and the Department of Interior will be able to provide $1 billion of federal financial assistance to rural or remote areas (up to populations of 10,000) and includes:

- Providing overall cost-effectiveness of energy generation, transmission, or distribution systems;
- Siting or upgrading transmission and distribution lines;
- Reducing greenhouse gas emissions from energy generation by rural or remote areas;

The DOE is specifically authorized to procure up to 50% of a new project's transmission capacity before transferring its share of the power lines to private entities.

4. **Enable DOE to act as a temporary "anchor tenant" for new transmission projects.** With aggregate funding of $10 billion, the DOE is specifically authorized to procure up to 50% of a new project's transmission capacity before transferring its share of the power lines to private entities. The DOE can also issue loans for new projects of up to $2.5 billion. These project costs are recoverable in rates. The DOE can participate with an eligible entity in designing, developing, constructing, operating, maintaining, or owning an eligible project. DOE can only select third parties for contracts under this paragraph through a competitive solicitation.

5. **Study, plan, and fund the construction of high-voltage and or medium-voltage transmission pilots.** Via a joint DOE and Department of Transportation office, this part of the Infrastructure Act provides funding to states to strategically deploy electric vehicle charging infrastructure in the rights-of-way of the Interstate Transportation System and to establish an interconnected network to facilitate data collection, access, and reliability. The Infrastructure Act also includes $5 billion (not included in the $27 billion referenced above) to build out a national network of electric vehicle (“EV”) chargers, including deployment of EV chargers along highway corridors to facilitate long-distance travel. Most of this investment will likely be classified as distribution or general and intangible plant, but the increased load from EVs could prompt the need for additional transmission investment.

6. **Clarify that the DOE can override state-level permit denials under certain conditions for transmission projects sited in national interest electric transmission corridors.** This element of the Infrastructure Act allows the DOE to produce a study identifying national corridors based on both congestion and capacity constraints. It requires national transmission

corridors designation to result in “a reduction in the cost to purchase electric energy for consumers” and provide either interregional or interstate benefits. It also amends the Federal Power Act so the Secretary of Energy can issue a Construction Permit after they determine the state or other entity responsible for approving the permit have not acted within: (A) one year after the facility application was filed; and (B) one year after a study by the DOE designating the relevant facility to be part of national interest electric transmission corridor. Alternatively, the DOE can override a state determination that approves the project but places onerous conditions on the project such that the project cannot reduce transmission constraints or congestion. Regardless, the DOE can override a state permit denial if the facility provides either interregional or interstate benefits and is designated as being in a national interest transmission corridor.

The $250 million cybersecurity program provides grants & technical assistance to eligible entities and enables the DOE to enter into cooperative agreements with rural & municipal utilities.

7. **Provide $3 billion in matching grants for Smart Grid projects.** This program provides additional funding for the existing Energy Independence and Security Act of 2007. It includes for example, development of a programmable and efficient energy transmission and distribution system to support the adoption or expansion of energy capture, electric vehicle deployment, or freight or commercial fleet fuel efficiency.

8. **Establish the “Rural and Municipal Utility Advanced Cybersecurity Grant and Technical Assistance Program.”** This $250 million cybersecurity program provides grants and technical assistance to eligible entities and enables the DOE to enter into cooperative agreements with rural and municipal utilities to protect against, detect, respond to, and recover from cybersecurity threats.

9. **Provide another $250 million for grid-enhanced security.** In conjunction with the Department of Homeland Security and energy stakeholders, the DOE will develop/promote advanced cybersecurity applications and technologies to identify and mitigate vulnerabilities. This program is also designed to leverage electric grid architecture as a means to assess risks and perform pilot demonstration projects with the energy sector.

The set aside programs for smaller and rural utilities provide an opportunity for public power and cooperatives to raise their level of reliability and security.

The Infrastructure Act provides additional momentum for transmission investment across the country. In particular, the set aside programs for smaller and rural utilities provide an opportunity for public power and cooperatives to raise their level of reliability and security by replacing and/or upgrading their aging transmission systems. Given the potential for grants or low-cost loans to subsidize the investment, both public power and cooperatives who are TOs (and those who are not TOs) now have an opportunity to make long overdue transmission investments at a lower cost.

About the Authors

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