



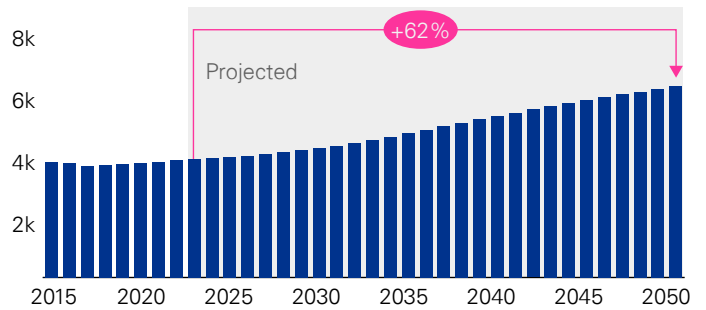
Powering Up

Improving Utility Interconnection

As electricity demand increases,...

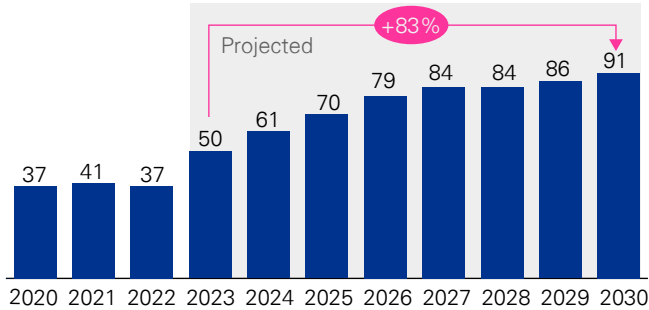
Electric demand is projected to grow by 62% in 2050 as companies electrify fleets and operations to meet climate goals. Transportation electrification alone accounts for 37% of the demand growth. As various industries undergo transformation due to increased electrification, the need for a reliable and sustainable energy supply continues to grow.

Electricity Consumption (TWh)



Source: National Renewables Energy Lab

Projected Solar, Wind and Storage Capacity in U.S. (GW)



Source: BloombergNEF

...renewable energy sources must be connected to the grid to augment supply;...

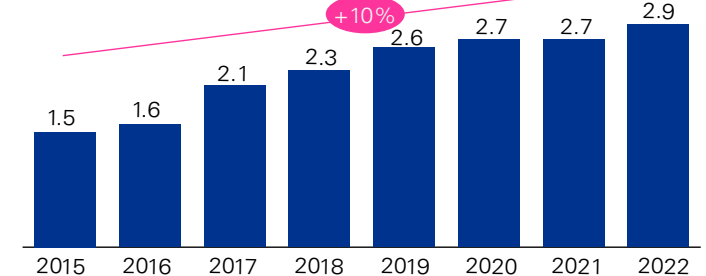
As the global focus shifts toward sustainable and environmentally friendly energy solutions, renewable energy sources such as solar, wind, and hydroelectric power are becoming indispensable for meeting the rising energy demands of our planet. To accommodate the expected increase in demand due to electrification, renewable energy sources are anticipated to grow by 83% by 2030. Connecting these resources to the grid is crucial for successfully achieving climate goals.

... however, the interconnection queue poses challenges for utilities.

This graph illustrates the increase in interconnection queue times over the past seven years, signifying a growing backlog of assets awaiting connection to the grid. This trend highlights the urgent need for optimization in the way utilities interconnect new assets to their grid. Challenges faced by utilities include:

- A surge in the volume of requests
- Siloed internal processes and inefficiencies
- Insufficient resources and personnel to manage requests

Average time it takes to interconnect in the US (Years)



Source: Lawrence Berkeley National Laboratory



This situation will likely worsen as more distributed generation and EV charging infrastructure are interconnected given IIJA and IRA stimulus

Improving interconnection speed and ease requires a multi-phase approach

KPMG can support you through three stages...



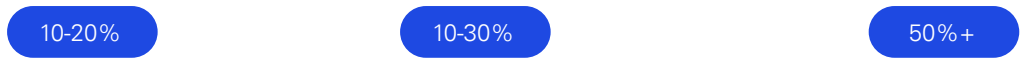
Journey Steps

- 01 Aligned and Optimized Process**
 - Set objectives
 - Baseline current process
 - Align responsibilities and resources
- 02 Digitalized Journey**
 - Identify opportunities to digitize and automate process steps (e.g., RPA, auto-approval)
 - Develop digital platform/solutions
 - Refine and roll out digital platform
- 03 Integrated Grid Planning**
 - Identify areas requiring system upgrades based on forecasted needs
 - Optimize non-wire alternative (NWA) and wire infrastructure to meet the need
 - Secure funding and permissions for proactive build out, flexibility incentives
 - Execute efficient build out and NWA rollout

Key Outcome


- 01 Aligned and Optimized Process**
 - Key stakeholders aligned on objectives and process starting and ending points
 - Defined process steps and roles
 - Customers regularly updated on the progress via text/email
- 02 Digitalized Journey**
 - Many interconnection steps are self-service and/or automated
 - Customers enabled to track application progress in real time
 - Few flexible interconnection options (e.g., curtailed if overload)
- 03 Integrated Grid Planning**
 - 90%+ request would not require grid upgrades, remainder connect via ARI
 - New loads/generation are able and incentivized to flex to support grid
 - Customer know exactly timing and cost of the interconnection

Lead Time Reduction



Future proofing given anticipated exponential demand for interconnection needs

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