NARUC Winter Policy Summit

Committee on Energy Resources and the Environment

Thanks to Our Leadership Sponsors

EEI Edison Electric INSTITUTE

aws

NRECA America's Electric Cooperatives

NARUC Winter Policy Summit

Load Growth – A Regulator's Guide to Getting it Right

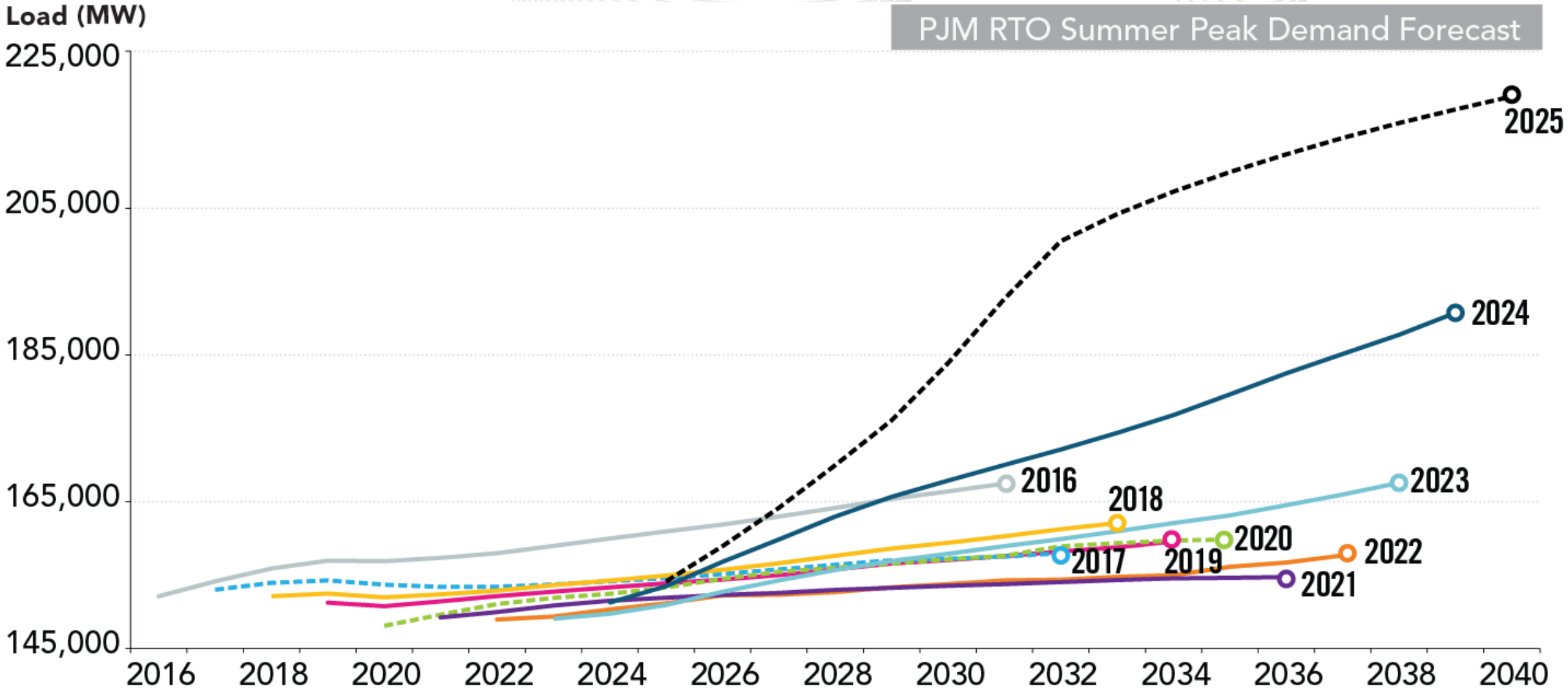
Moderator: Hon. Christine Guhl-Sadovy, New Jersey BPU

Speakers

- Jason Stanek – Executive Director, PJM Interconnection
- Angela Navarro – President, ALN Policy and Law, LLC
- Britt Reichborn-Kjennerud – Director E-Mobility, Con Edison
- Greg Geller – Founder and CEO, Stack Energy Consulting

Committee on Energy Resources and the Environment

Electricity Demand Growth



(Large) Load Growth – A Regulator's Guide

Principles:	Questions:	Considerations:
Cost Allocation	1) What infrastructure will you need to accommodate new loads (e.g., generation capacity, transmission, substations)? 2) How should you equitably allocate costs among customer classes? 3) How can large load customers help minimize financial impact?	➢ Cost causation and transparency ➢ New rate classes: ▪ Load factor ▪ Size of contract demand ➢ Minimum demand charges ➢ Policy considerations ➢ Timeline
Risk Minimization	1) How accurate are your load forecasts? 2) How do you minimize the risk of stranded assets if load doesn't materialize? 3) How do you mitigate underbuilding your system if load materializes more quickly?	➢ Contract minimums ➢ Term lengths ➢ Deposits ➢ Load ramps ➢ Collateral/security ➢ Capacity reassignment ➢ Exit or termination fees
Resource Sourcing	1) What are the resource characteristics these large loads are seeking? 2) What process is used to procure these resources? (e.g., RFP, bilateral contracting, capacity expansion modeling) 3) How are selected resources integrated into the utility's long-term plan?	➢ Distribution: substations, distr. lines ➢ Transmission: transmission expansions, transmission upgrades, GETS, reconductoring ➢ Generation: firm, clean firm, ring fenced, co-located resources ➢ Demand response and load flexibility

MEETING LOAD GROWTH WHILE BALANCING RELIABILITY, AFFORDABILITY, AND STATE POLICY OBJECTIVES

FEBRUARY 24, 2025

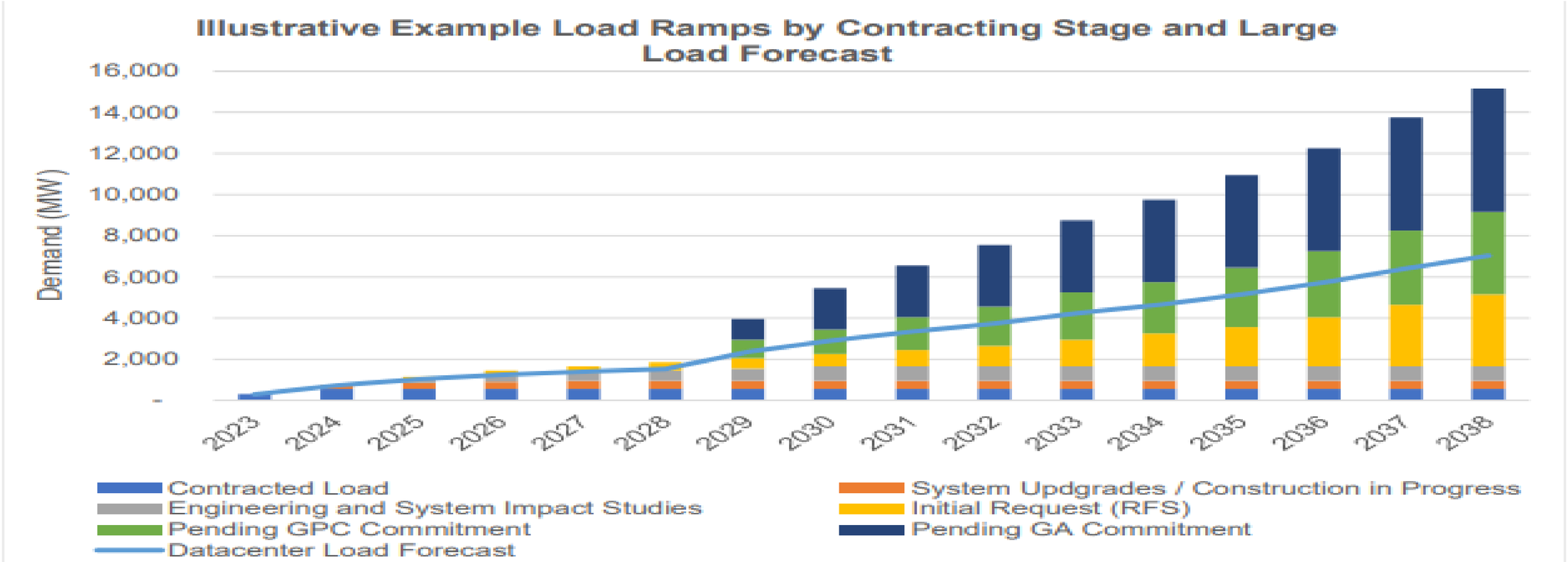
STACK ENERGY CONSULTING

LOAD FORECASTING BEST PRACTICES

Standardize	Ask	Study
Develop a standardized discounting methodology based on customer milestones	When large loads seek to interconnect, ask if they will reduce their grid consumption in return for faster interconnection and/or lower costs; incorporate in forecast	Conduct a potential study of VPPs, EE, TVR, etc. and incorporate the results into load forecast

LOAD FORECASTING BEST PRACTICES

Discount loads in forecast based on milestones and financial commitment



Microsoft Comments on Georgia Power IRP. April 1, 2024. Docket No. 55738. Document Detail (ga.gov)

OPTION 1: PROVIDE TRANSPARENCY AND FLEXIBILITY TO ENABLE CONNECTION OF NEW LARGE LOADS IN A RELIABLE, AFFORDABLE MANNER

Hour of the Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	100%	100%	100%	100%	100%	100%	92%	100%	99%	100%	100%	100%
1	100%	100%	100%	100%	100%	100%	98%	100%	100%	100%	100%	100%
2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
3	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
5	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
6	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
7	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
8	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
9	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
10	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
11	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
13	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
14	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
15	100%	100%	100%	100%	100%	100%	100%	100%	87%	100%	100%	100%
16	100%	100%	100%	100%	100%	100%	89%	94%	83%	100%	100%	100%
17	100%	100%	100%	100%	100%	100%	75%	83%	71%	100%	100%	100%
18	100%	100%	100%	100%	100%	100%	59%	68%	64%	100%	100%	100%
19	100%	100%	100%	100%	100%	100%	63%	66%	56%	100%	100%	100%
20	100%	100%	100%	100%	100%	100%	64%	66%	59%	100%	100%	100%
21	100%	100%	100%	100%	100%	100%	75%	76%	73%	100%	100%	100%
22	100%	100%	100%	100%	100%	100%	85%	87%	84%	100%	100%	100%
23	100%	100%	100%	100%	100%	100%	85%	94%	88%	100%	100%	100%

FLEX CONNECT: Can Support Full Request ~90% of the time on Average

California Public Utilities Commission. Order Instituting Rulemaking Regarding Transportation Electrification Policy and Infrastructure. Rulemaking 23-12-008. Filed By Southern California Edison Company (U 338-e), San Diego Gas & Electric Company (U 902 E), And Pacific Gas And Electric Company (U 39 E) . May 21, 2024. Here is link.

OPTION 2: PURSUE ADVANCED TRANSMISSION TECHNOLOGIES

Utilize Existing Inventory, Consistent with Nov 2024 NARUC Resolution

"...GETs can increase utilization on new and existing transmission lines by 16% or more; reduce congestion by 50% or more; and save over $5 billion in production cost savings annually"

"...reconductoring with HPCs could double the capacity of existing transmission lines at approximately half the cost of building a new transmission line"

NARUC Nov 2024 Resolution "Supporting the Integration of Advanced Transmission Technologies in the Electricity Transmission System"

ADVANCED TRANSMISSION TECHNOLOGIES ("ATTs"), STORAGE, VPPs, CAN HELP MEET LOAD GROWTH NEEDS

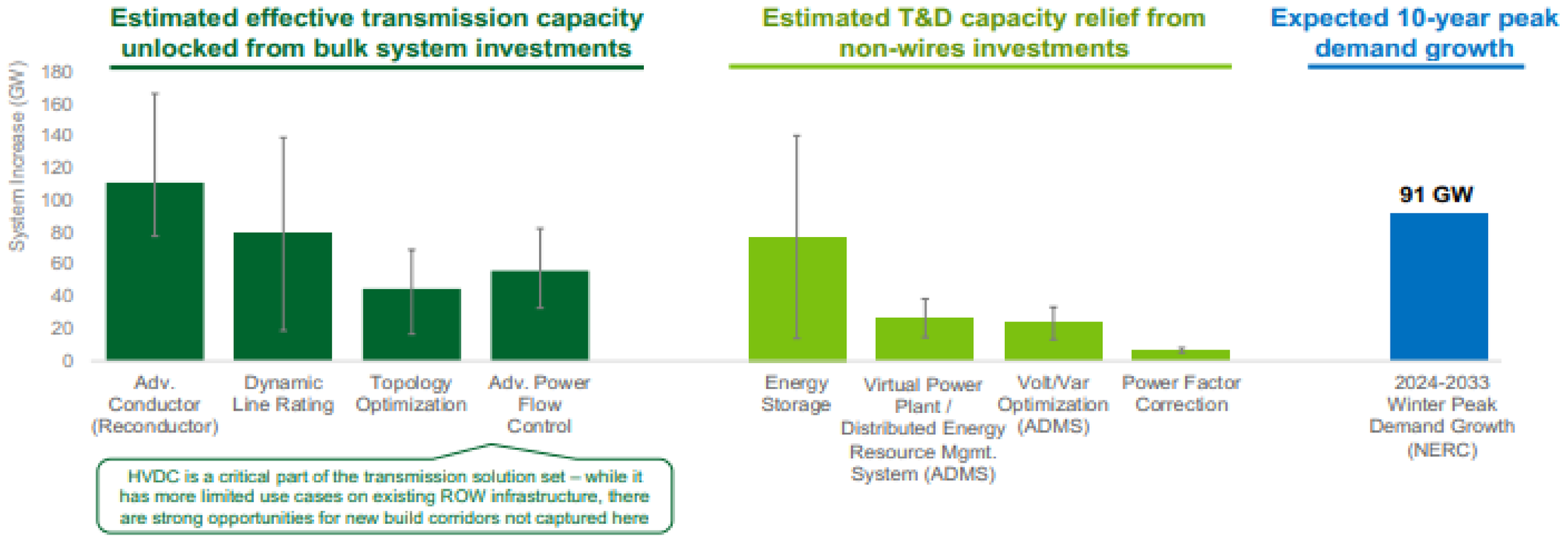


Figure 2. Estimated transmission and distribution (T&D) capacity impact from full potential deployment[7]

Graphic from DOE Pathways to Commercial Liftoff: Innovative Grid Deployment (energy.gov)

GREG GELLER
FOUNDER & CEO
STACK ENERGY CONSULTING
(781) 808-6616
GREG@STACKENERGYCONSULTING.COM

ALEX WORSLEY
PRINCIPAL
STACK ENERGY CONSULTING
(914) 525-2512
ALEX@STACKENERGYCONSULTING.COM

STACK ENERGY CONSULTING