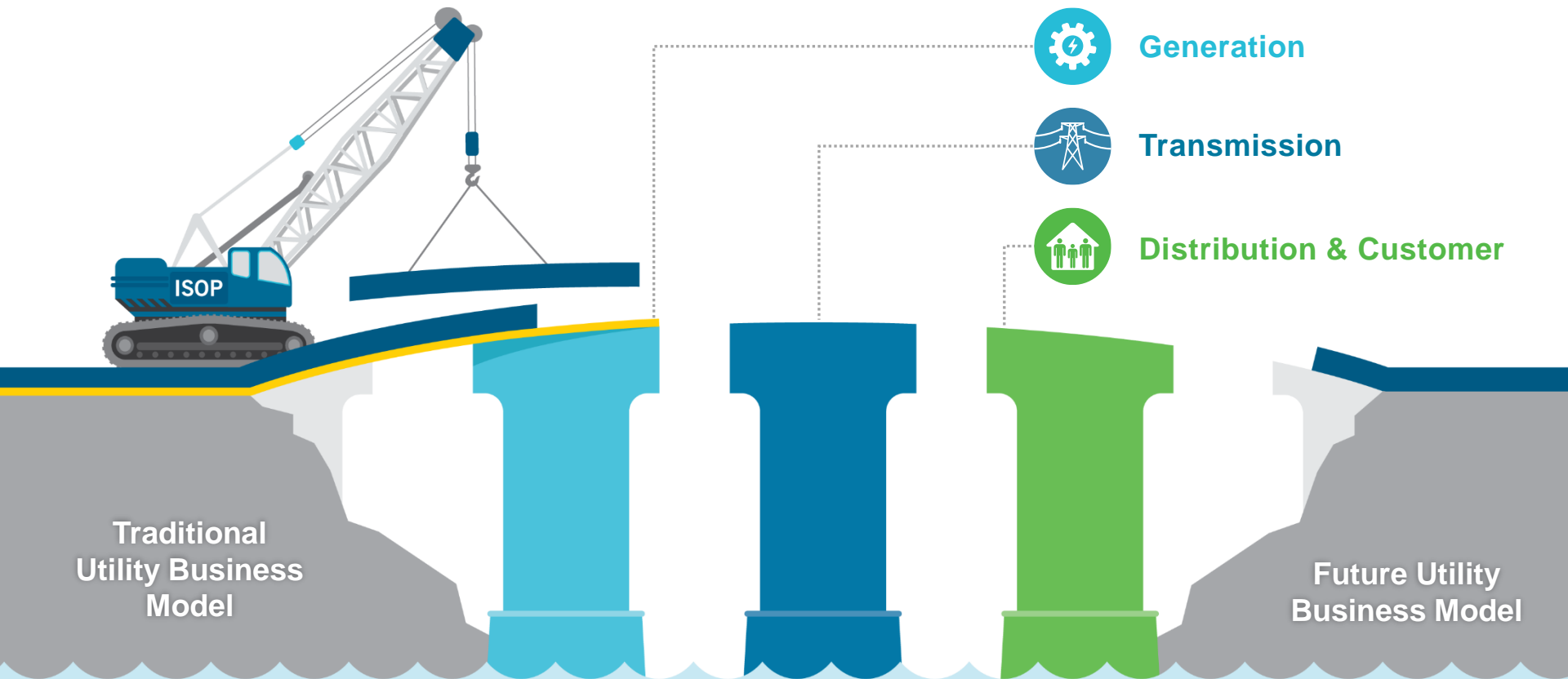


Reimagining Planning

November 1, 2023



We Don't Make Plans... We Make Planning Better!





Digital-born Transparent Repeatable Granular Capacity Planning



*Traditional
Local Planning*

*Advanced Integrated
Distribution Planning*



1/7 of the system evaluated annually

Local knowledge-based planning

Short Planning Horizon

Limited visibility of DERs

Technical Solutioning



Complete system planned annually

Systematic defensible, transparent planning

Longer Planning Horizon

Morecast forecast & NTS proxy values

Techno-economic Solutioning

ISOP
informed
MYRP
investment

\$1.9B

ISOP Contributions

Process
Patent

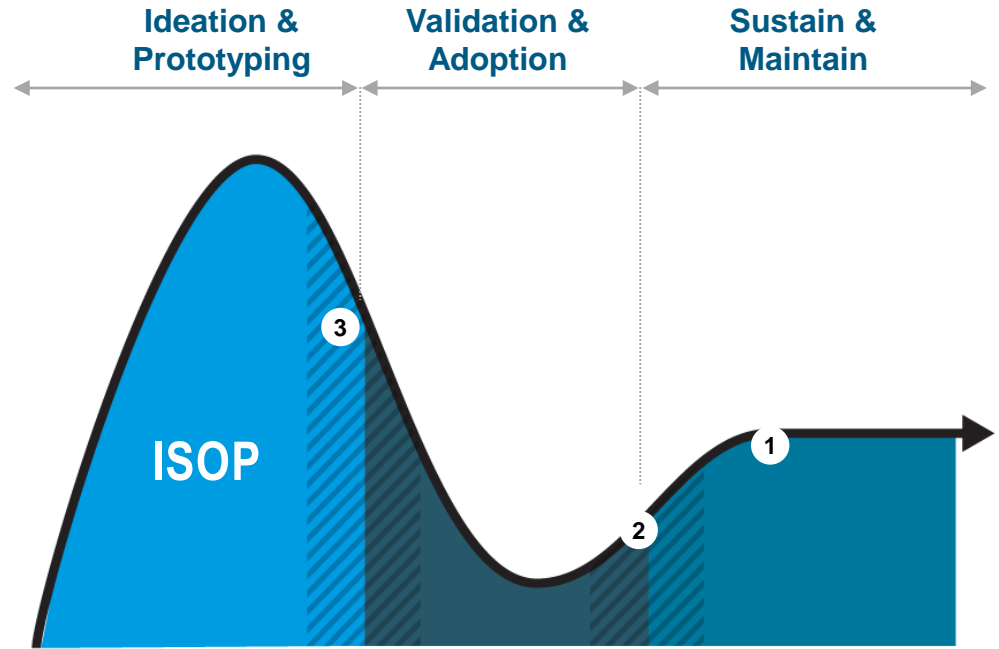
Data & Systems
Support

NTS Screening
& CBA

Morecast
Forecast

Regulatory
Defense

How ISOP Collaborates with Business Partners



- 1 Advanced Distribution Planning (ADP)
- 2 Battery Non-Traditional Solutions (NTS)
- 3 Proactive Transmission

ISOP - R&D
Through R&D create methods to address planning gaps

Project Delivery
Build & roll-out ISOP demonstrated solutions to fill planning gaps

Planning – Plan Producer
Routinely produce investment plans

Continued Collaboration

"ISOP is the BASF of planning."

– Preston Gillespie, Executive VP

"Traditional forms of grid planning are no longer adequate - Duke Energy has implemented ISOP for grid plans increasing amounts of data, such as the propensity to adopt solar and purchase EVs when planning future projects."

– Brent Guyton, NC MYRP Distribution testimony

"ISOP is a comprehensive framework for integrating generation, transmission, distribution and customer program planning... ISOP is also integral to screening processes for non-traditional solutions ("NTS")."

– Dan Maley, NC MYRP Transmission testimony

"Many grid investments would not have passed regulatory scrutiny in our recent Carolinas MYRP filing without being ISOP informed – fully leveraging the framework established and stakeholder engagement platform. Looking to the future, a similar robust valuation approach for Grid Edge resources will be needed as we look to optimize and orchestrate behind the meter resources."

– Emily Henson, Integrated Grid Strategy

"Among the 19 states that addressed IRP policy in the second quarter of 2023, Duke Energy Carolinas' Integrated System and Operations Plan, or ISOP, was one of the most innovative tests of the value of integrating DSP and IRP planning."

– Autumn Proudlove
NCCETC Associate Director,
Policy and Markets

"The Integrated Systems & Operations Planning program is a truly innovative program that could enable a more dynamic grid, and its Advanced Distribution Planning and Morecast components both represent major steps forward in analytical capacities for distribution planning. We support this program."

– Tyler Fitch, Vote Solar

- *"Duke Energy's approach to considering contributions from DERs is a planning best practice."*
- *"Duke Energy's ADP automates circuit upgrades downstream of substations... a best practice that prepares the company for cost-effective constraint mitigation"*

– A comparative analysis of integrated planning practices by LBNL/DOE

Duke Energy's current integration of IRP, transmission planning, and ADP is a step in the right direction. At the same time, there is no clear information on how the portfolio of planned investments across these domains – including potential non-traditional solutions – will balance competing objectives, such as cost, risk, and reliability

– LBNL/DOE

A third complete, two-thirds to go

