

Consumers Energy Company Integrated Planning Overview

Organization of MISO States & Midwest Governors Association

November 17, 2020

Integrated Planning Overview



EGI Roadmap

01	Energy Waste Reduction & Demand Response
02	Battery Storage & Non-Solar DER
03	Beneficial Electrification
04	Load Forecasting
05	Existing Assets
06	Solar
07	Wind
08	Power Plan Agreements
09	Grid Modernization
10	Distributed Energy Resources Integration
11	Integrated Planning
12	Capabilities & Tools
13	Talent
14	Strategic Partnerships
15	Regulatory
16	Governance
17	Communication Integration



- Strategic Structure**
- 3 Strategic Choice Categories
 - 4 Strategic Pillars
 - Enables direction for Detailed Asset Planning Development

Integrated Resource Plan

- IRP Summary**
- 20-year View, based on PCA-Proposed Course of Action through 2040.
 - 18-month Development Cycle
 - File every 3 years
 - IRP Steering Committee

Electric Distribution Infrastructure Investment Plan

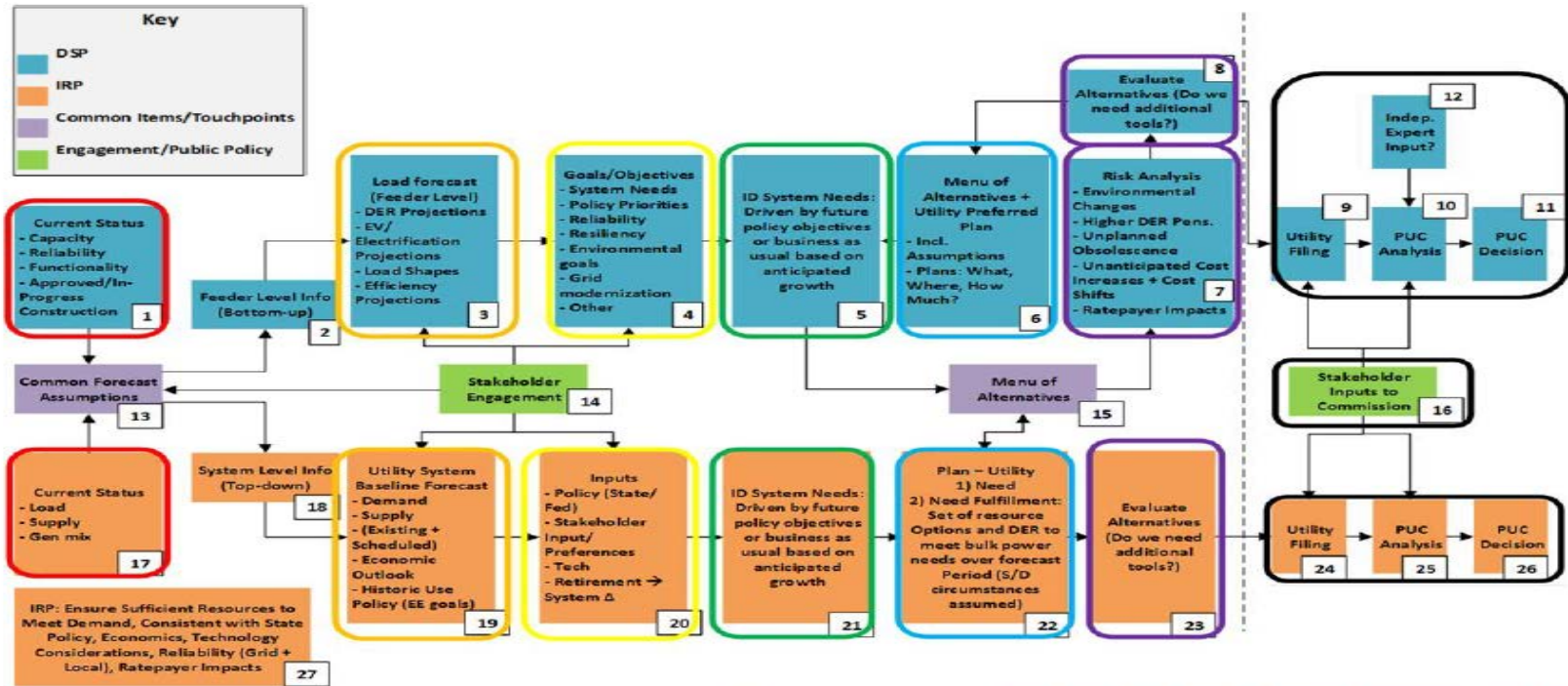
- EDIIP Summary**
- 5-year View
 - Goals – (Safety & Security/Reliability/Sustainability/Control/System Cost)
 - 14 Metrics Tracked
 - CE System Performance (SAIDI/SAIFI/CAIDI)
 - Grid Capabilities ()
 - 18-month Development Cycle
 - File every 3 years
 - EDIIP Steering Committee

Electric Rate Case and IRP Development

Long Term Financial Plan Process



NARUC Integrated Planning Process



NARUC
National Association of
Regulatory Utility Commissioners

NARUC-NASEO TASK FORCE
ON COMPREHENSIVE
ELECTRICITY PLANNING



NASEO
National Association of
State Energy Officials

Integrated Planning Structure and Governance

PRIOR TO Q3 2019

Developing capabilities **by asset** for the **traditional grid**

Generation	Electric Supply	HVD	LVD	Other
Planning	Planning	Planning	Planning	
Design	Design	Design	Design	
Analytics	Analytics	Analytics	Analytics	Analytics
Emerging Tech (some, growing)	Emerging Tech (limited)		Emerging Tech (some, growing)	
				Strategy
				Regulatory
				Compliance

AFTER Q3 2019

Developing capabilities **by function** to build a fully **integrated and modernized energy system**

Planning	Design	Electric Supply	Other
Generation	Generation	Wholesale power markets, contracts and power supply cost recovery	Strategy
Supply			Analytics (Gen, supply, Grid)
HVD	HVD		Regulatory
LVD	LVD		Compliance
Emerging Tech (embedded within)	Emerging Tech (embedded within)		

- **Steering Committees** for Regulatory Policy, IRP, EDIIP connect senior leadership with planning organization
- **Cross-functional Operating Reviews** - daily, weekly, monthly – bring awareness and visibility into planning activities
- **Business Plan Deployment** – metrics, financial planning, performance management – ensures common goals and financial direction

Evolution of Integrated Planning – IRP and EDIIP

2018

- Fully separate IRP and EDIIP, filed 3 months apart
- Plans developed by different organizations within Company
- Little/no attempted alignment between filings

2021

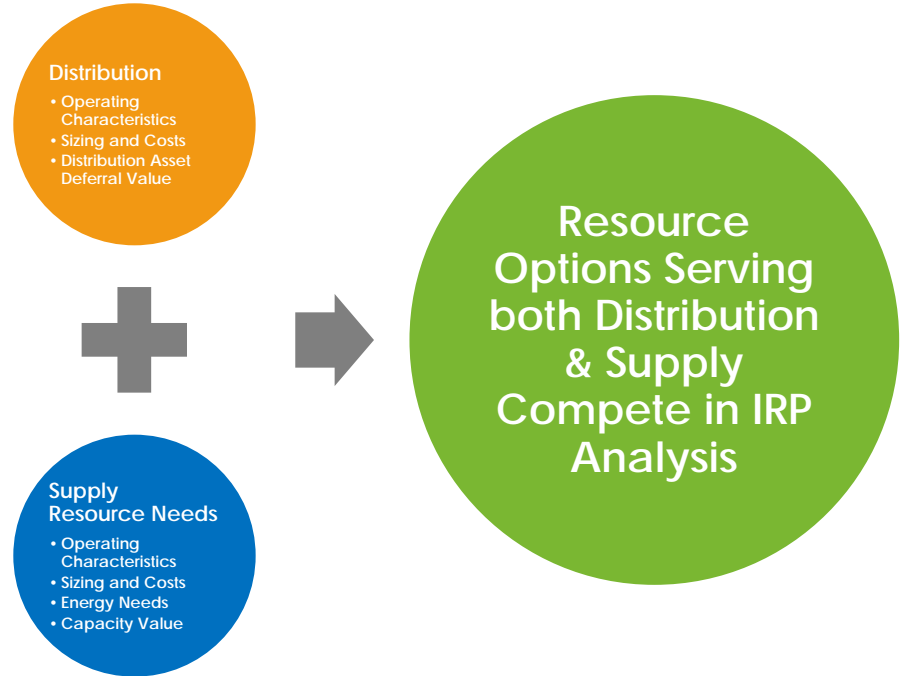
- Separate IRP and EDIIP dockets, filed at same time and reinforcing each other
- Both plans developed within single Electric Planning organization
- Clearer alignment in areas including:
 - Load forecasting
 - EWR and DR forecasting
 - DER and EV forecasting
 - Grid storage

2024+

- Further integration
- Path of integration will be informed by this workgroup

Example of Integration: Battery Storage

- Resources include primary and secondary services to satisfy distribution **and** supply needs
- Example
Distribution Asset Deferral Battery
 - Primary Services
 - Available to Distribution to reduce local load
 - Operates on weekdays, certain times, certain months
 - Secondary Services
 - Available to provide energy and capacity for supply
 - Operates when lower energy costs can be achieved



*IRP is Integrated Resource Plan

Integration Challenges

- Translating high-level assumptions used in transmission planning and integrated resource planning down to the distribution planning level
- Integrating stakeholder input to distribution plans
- Maturing emerging areas such as EVs or DERs from conception, to pilot, to actual deployment and use in planning analysis
- Aligning analytical tools used in respective planning analyses