Demand Response and Energy Efficiency in the ISO

Gathering input on a roadmap for demand response and energy efficiency
Several objectives drive roadmap activities.

Enable alternatives for transmission or local capacity

Integrate alternative resources in ISO markets to follow load, integrate renewables, or avoid new capacity

Support demand response and energy efficiency investments

Align wholesale and retail signals to enable resources to respond to grid conditions

Evolve and establish technology & regulatory framework to support all goals

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DR and EE may satisfy needs as cost-effective alternatives.

Enable alternatives to transmission or local capacity to enable the most cost-effective options to satisfy needs:

- Establish performance criteria for alternative resources
- Evolve process for selecting and tracking development of selected alternatives
- Verify performance of demand response and energy efficiency programs
- Align key agency processes for consistent input assumptions

**Please provide feedback:**

Are there additional activities needed?

Who needs to lead and be involved in implementing these activities?

ISO Transmission planning process

CEC IEPR

CPUC LTPP
Transparency and certainty is needed for investment.

Enable market transparency, revenue certainty and resource viability to support demand response and energy efficiency investments

- Determine future system and local operational needs from resource fleet as the grid evolves
- Develop ISO market products tailored to future operational needs
- Establish a multi-year forward procurement framework to target procurement of needed capabilities

Please provide feedback:

Are there additional activities needed?

Who needs to lead and be involved in implementing these activities?

Key processes:

ISO 3-5 year capacity market stakeholder process
CPUC 3-5 year capacity market proceeding
ISO Capacity procurement mechanism
ISO Flexible Capacity and Local Reliability Resource Retention
CPUC Cost-Effectiveness Protocols
CPUC DR application 3-year cycle
CPUC EE application 3-year cycle
CPUC LTPP
ISO Flexibility Studies
CPUC RA proceeding
DR can bring needed operational characteristics.

Integrate alternative resources in ISO markets to follow load, integrate renewables, or avoid new capacity

- Review existing utility demand response programs and implement as many as possible in the ISO market in the near-term

- Implement ISO market products tailored to operational needs

- Support 3rd-party and utility demand response program development consistent with needed operational characteristics

- Support pilots to test resource capabilities and gain operational experience

Please provide feedback:

Are there additional activities needed?

Who needs to lead and be involved in implementing these activities?

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DR can bring needed operational characteristics.

- Support regulatory policy and rules for direct participation in wholesale markets
- Seek changes to federal reliability standards to remove barriers to participation
- Implement reliability and market-based demand response models after resolution of federal legal challenges
- Support consumer choice to enable innovation and development of demand response participation

Please provide feedback:
Are there additional activities needed?
Who needs to lead and be involved in implementing these activities?

Key processes:
- CPUC Rule 24 – direct participation
- ISO flexible ramping product
- ISO PDR, RDRR, NGR model changes
- CPUC DR application 3-year cycle
- CPUC EPIC
- WECC Balancing standard

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Consistent signals can benefit entire system.

Align wholesale and retail signals to enable distributed resources to respond to grid conditions

- Consistent annual funding levels for FlexAlert conservation campaign
- Pursue changes in retail rate structure that better aligns with system conditions and produces beneficial changes in consumption patterns
- Develop coordination models that enable a whole system optimization for cost and reliability
- Design and conduct price-responsive distributed energy resource pilots in coordination with distribution system operators
- Model demand elasticity in ISO market

Please provide feedback:

- Are there additional activities needed?
- Who needs to lead and be involved in implementing these activities?

Key processes:
- CPUC DR application 3-year cycle
- CPUC rate design

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Regulatory and technology frameworks support all goals.

Evolve and establish technology and regulatory framework enabling above goals

- Expand metering and telemetry options to support emerging business models and lower costs
- Increase coordination and data sharing with distribution system operations
- Streamline demand response market registration process and implement demand response system enhancements to reduce complexity and registration time
- Develop electrical location mapping tool in coordination with distribution operator to support registration and verification

Please provide feedback:

Are there additional activities needed?

Who needs to lead and be involved in implementing these activities?

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Activities provided on a timeline to support goals.

The bars represent required activities while the different colors identify the entities involved.

The diamonds are milestones, the arrows describe dependencies.
All the activities fall within the objectives as represented by the icons and their gradients.
Thank you for your feedback

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