

RETI Renewable Generation Scenarios

RETI Transmission Working Group Discussion

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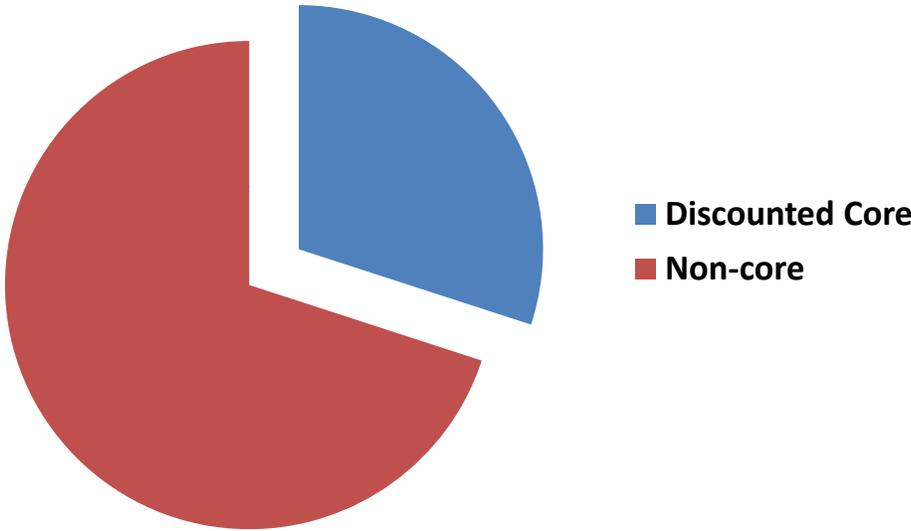
RETI 2020 Scenarios

- Recommended by RETI transmission working group for CTPG Phase 2 assessment;
- Intended to *bound* likely generation development patterns *rather than* to represent them;
 - “least regrets” transmission projects will be common to all scenarios;
- Based on revised RETI CREZ assessments and areas with firm commercial interest;
- Similar to CPUC LTPP scenarios;
- Details to be finalized by TWG 2/11

Renewable Energy in RETI Scenarios

- Total energy equals recently adopted RETI net short = 52,764 GWh in 2020;
- “Discounted core” energy provided by generation projects with firm commercial interest;
 - Core energy is the same in all scenarios
- Non-core energy provided by preferred CREZ representing different development patterns.

Renewable Energy in RETI Scenarios



Discounted Core Criteria

- Projects with firm commercial interest expected to be online by 2020
 - Projects having signed interconnection agreements with TOs, together with
 - Projects having all of:
 - Approved **or pending** LSE contracts; and
 - Permitting process begun; and
 - Interconnection queue positions.
- **Details to be discussed.**

Scenario Choices for Non-Core Energy

- Scenario #1 – heavy in-state development
 - Pro rata energy from CA CREZ having (revised) economic and environmental ratings below median values
- Scenario #2 – heavy out-of-state development
 - Pro rata energy from OOS CREZ having economic ratings below ???
- Scenario #3 – environmentally preferred development
- Details to be discussed

RETI Scenario Recommendations (proposed)

- Scenario #1 – heavy in-state development
 - RETI recommended
- Scenario #2 – heavy out-of-state development
 - RETI recommended
- Scenario #3 – environmentally preferred development
 - CPUC recommended **and RETI recommended?**

Scenario #1 Non-core Methodology (heavy in-state generation)

- Pro rata energy from CA CREZ having economic and environmental ratings below median values
 - Found in lower left quadrant of revised bubble chart
- Energy from each CREZ to include any energy from that CREZ which is in the discounted core

Scenario #1 Example

- Assume:
 - Core = 20,000 GWh with
 - 8,000 GWh from preferred CA CREZ
 - 12,000 GWh from other areas
 - Total energy needed from preferred CA CREZ
 - = $52,764 - 12,000 = 40,764$ GWh
 - Energy from all CREZ in LLQ = 100,000 GWh
 - Scenario includes 40.764% from each LLQ CREZ
 - = total of energy from CREZ in core *and* non-core
 - % not to exceed ???

Scenario #2 Non-core Methodology (heavy OOS generation)

- Pro rata energy from OOS CREZ having economic ratings below ???
- Energy from each CREZ to include any energy from that CREZ which is in the discounted core
- Example similar to scenario #1 but using preferred OOS CREZ

Scenario #3 Non-core Methodology (environmentally preferred generation)

- Pro rata energy from environmentally preferred CREZ
 - Criteria for CREZ ???
- Energy from each CREZ to include any energy from that CREZ which is in the discounted core
- Example similar to scenario #1 but using environmentally preferred CREZ

Discussion – Core Criteria

- Size of discounted core (larger core reduces RETI input)
- Signed interconnection agreements;
- Other commercial interest;
 - Contracts approved and pending?
 - Data sources?
- Inclusion of POU projects
- Other issues

Discussion – Non-core Criteria

- Limit on % of energy from any single CREZ
- CREZ energy to include energy in core
- Preferred OOS CREZ criterion for scenario #2
- Environmentally preferred CREZ criteria for scenario #3

Discussion – Other Issues

- “Low load” sensitivity using smaller net short
- RETI 160% factor
- Identification of transmission projects other than “least regrets”
 - RETI support for scenario recommendations
 - CTPG acceptance of RETI recommendations
 - Phase 2 and Phase 3 considerations