2026 PNM IRP Stakeholder Scenario Office Hours

June 10, 2026

Stakeholder Scenario #10

Stakeholder request

- **Stakeholder**: Transmission subgroup
- **Purpose**: Understand the impact of Sun Zia, Rio Sol, and Blackwater DC Tie projects on reliability and portfolio composition
- **Description**: Assess reliability using SERVM by adjusting transfer limits and market access assumptions to reflect increased transmission connectivity, including adding SPP and CAISO zones. Portfolios should be right-sized to achieve equivalent reliability to the CTP case, followed by full production cost modeling. NPV comparisons should reflect both capacity and production cost benefits, with clear documentation of all transmission and market access assumptions

PNM modeling changes

- Requested scenario requires significant model development which cannot be accommodated within IRP timeframe.
- PNM discussed the scenario with the requestors and decided that the existing SERVM model was not granular enough to address the specific question requested.
- PNM proposed reviewing the impact of increasing transfer capability in the existing SERVM model as a proxy to test how expansion might impact planning reserve margin (PRM).

Stakeholder Scenario #10 (Results)

Observations

- In SERVM, doubling the summer import capacity over super peak from 50 MW to 100 MW showed an approximate 40 MW benefit, which translates to roughly a 1.4% reduction in planning reserve margin when carried through the calculation.
- Benefit is less than 1:1 indicating there are hours where the constraint is resource availability from neighboring regions rather than the import limit itself. Additional capacity isn't always deliverable.

Stakeholder Scenario #11 & 12

Stakeholder request

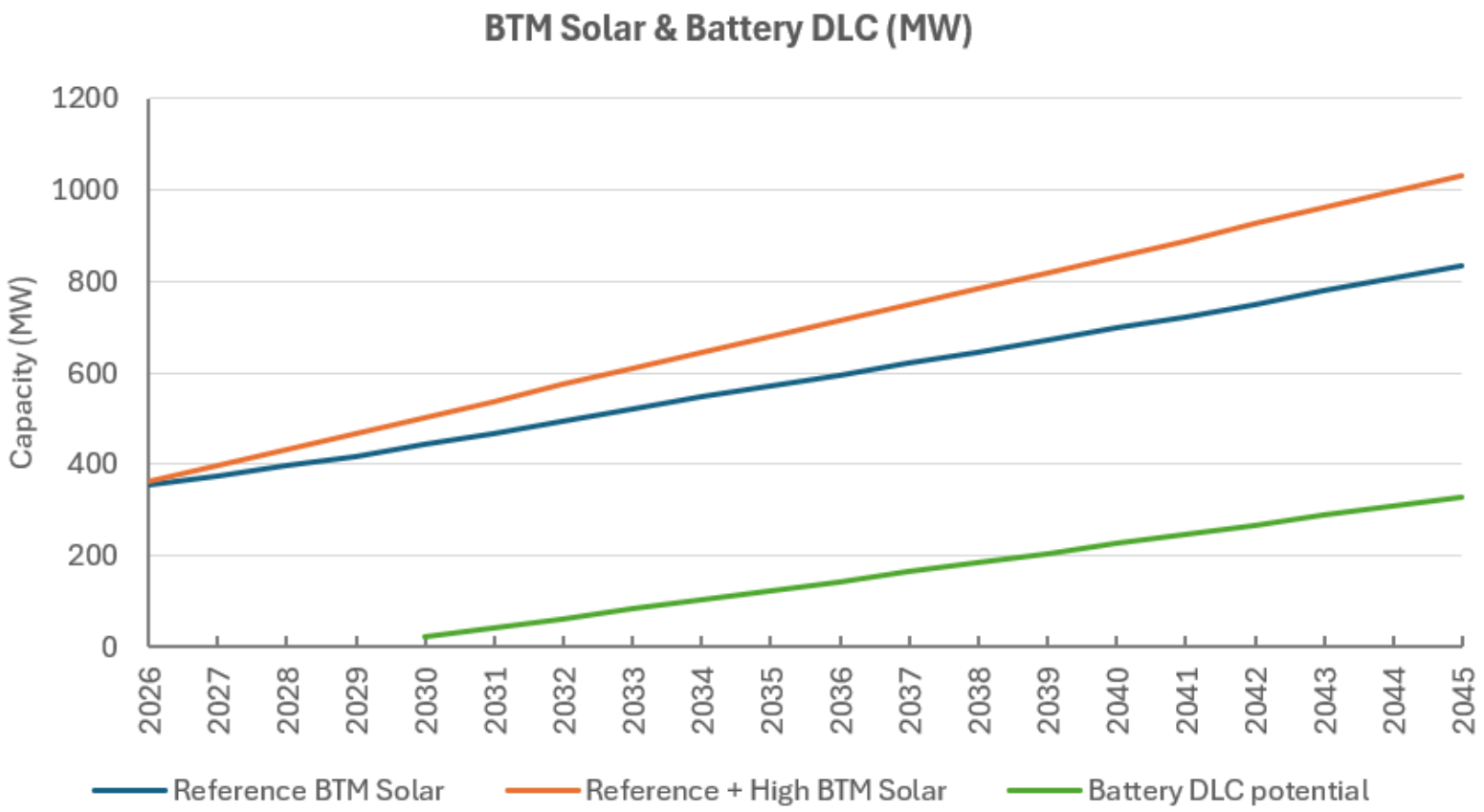
- **Stakeholder**: Geothermal, CCAE, DER Subgroup
- **Purpose**: Understand the impact of geothermal, ITC, availability of SMR, high DER, no hydrogen conversion, and with and without 172 MW gas unit added in 2029
- **Description**: Follow stakeholder scenarios #2 (Geothermal group) and #7 (DER group); add in ITC assumptions for both geothermal and SMRs; move new SMR first year available date to 2040; remove hydrogen conversion and CCS from project options; with and without 172 MW gas unit added in 2029

PNM modeling changes: Two runs

- Run 1: Follow stakeholder scenarios #2 (updated geothermal cost) and #7 (High BTM solar+TOU+High Battery DLC, etc.); add in ITC assumptions (2026-2033: 30%, 2034: 22.5%, 2035: 15%, 2036-2045: 0) for both geothermal and SMRs; move new SMR first year available date to 2040; remove hydrogen conversion and CCS from project options
- Run 2: Same as run 1 except for removal of 172 MW gas unit added in 2029

Stakeholder Scenario #11 & 12

PNM's BTM Solar forecast and updated Battery DLC potential



Stakeholder Scenario #11 (Results)

CTP SS Geo+DER+ITC+SMR+no H2&CCS

(CTP SS Geo+DER+ITC+SMR+no H2&CCS) minus (CTP) Installed Capacity (MW)													
	Firm Dispatchable Resources							Dynamic Balancing Resources		Carbon-Free Energy Resources			
Year	Nuclear (MW)	Gas Combined Cycle (MW)	Gas Combustion Turbine (MW)	Gas Internal Combustion (MW)	LD Storage (MW)	Pumped Hydro (MW)	Geothermal (MW)	SD Storage (MW)	Demand Response (MW)	Solar (MW)	Wind (MW)	Energy Efficiency (MW)	Total (MW)
2026	-	-	-	-	-	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-	-	-	-	-	-
2028	-	-	-	-	-	-	-	-	B	-	-	-	-
2029	-	-	-	-	-	-	-	(0)	-	(18)	-	-	(18)
2030	-	-	-	-	-	-	-	-	19	(31)	-	-	(12)
2031	-	-	-	-	C	-	-	(0)	18	(0)	-	-	18
2032	-	-	-	-	-	-	-	-	16	(74)	-	-	(58)
2033	-	-	-	-	(100)	-	350	-	18	(111)	-	-	157
2034	-	-	-	-	-	-	A -	-	19	(17)	D	-	2
2035	-	-	-	-	-	-	-	-	19	(93)	-	-	(74)
2036	-	-	-	-	-	-	-	-	20	(66)	-	-	(46)
2037	-	-	-	-	-	-	-	-	20	(94)	-	-	(74)
2038	-	-	-	-	-	-	-	-	20	(23)	-	-	(2)
2039	-	-	-	-	-	-	-	-	20	(125)	-	-	(105)
2040		-	-	(120)	-	-	-	(35)	18	-	-	-	(137)
2041	(146)	-	-	(40)	-	-	-	(107)	19	83	-	-	(190)
2042	(146)	-	-	-	-	-	-	D (36)	20	100	54	-	(9)
2043	-	E	← →	E -	-	-	-	(38)	21	92	47	-	121
2044	(146)	-	-	-	200	-	-	(53)	20	113	-	-	135
2045	438	-	-	-	-	-	-	(32)	23	(300)	E 161	-	290
Total	-	-	-	(160)	100	-	350	(300)	310	(563)	261	-	(2)

Observations

A. With ITC added to stakeholder provided costs, enhanced geothermal is favorable. Diminishing ITC drives overbuild in 2033.
B. Demand Response Column shows Behind the Meter Battery DLC
C. Displaces capacity from LD storage in focus period but not over 20-yr planning period.
D. Higher behind the meter solar displaces supply-side solar.
E. Longer term:
    1. Nuclear is deferred
    2. Linear generation no longer selected
    3. More wind and less solar

Yields a NPV of $564M less than the CTP case due to supply-side costs being displaced by BTM solar and battery and favorable geothermal capacity pricing.

Stakeholder Scenario #12 (Results)

CTP SS Geo+DER+ITC+SMR+no H2&CCS+no 29Gas

(CTP SS Geo+DER+ITC+SMR+no H2&CCS+no 29Gas) minus (CTP) Installed Capacity (MW)													
	Firm Dispatchable Resources							Dynamic Balancing Resources		Carbon-Free Energy Resources			
Year	Nuclear (MW)	Gas Combined Cycle (MW)	Gas Combustion Turbine (MW)	Gas Internal Combustion (MW)	LD Storage (MW)	Pumped Hydro (MW)	Geothermal (MW)	SD Storage (MW)	Demand Response (MW)	Solar (MW)	Wind (MW)	Energy Efficiency (MW)	Total (MW)
2026	-	-	-	-	-	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-	-	-	-	-	-
2028	-	-	-	-	-	-	-	-	-	-	-	-	-
2029	-	-	(172)	-	-	-	-	(0)	-	(17)	-	-	(189)
2030	-	-	-	-	-	-	-	23	19	(8)	-	-	34
2031	-	-	-	-	-	-	-	(0)	18	(0)	-	-	18
2032	-	-	-	-	-	-	-	-	16	(74)	-	-	(58)
2033	-	-	-	-	(100)	-	350	-	18	(111)	-	-	157
2034	-	-	-	-	-	-	-	-	19	(17)	-	-	2
2035	-	-	-	-	-	-	-	-	19	(93)	-	-	(74)
2036	-	-	-	-	-	-	-	-	20	(66)	-	-	(46)
2037	-	-	-	-	-	-	-	-	20	(94)	-	-	(74)
2038	-	-	-	-	-	-	-	-	20	(23)	-	-	(2)
2039	-	-	-	-	-	-	-	-	20	(125)	-	-	(105)
2040	-	-	-	(120)	-	-	-	(35)	20	-	-	-	(135)
2041	(146)	-	-	(40)	-	-	-	(62)	21	233	-	-	6
2042	-	-	-	-	-	-	-	(36)	21	-	-	-	(16)
2043	-	-	-	-	100	-	-	(152)	21	-	-	-	(32)
2044	(146)	-	-	-	100	-	-	64	20	125	-	-	163
2045	292	-	-	-	-	-	-	(103)	21	(295)	262	-	176
Total	-	-	(172)	(160)	100	-	350	(302)	312	(565)	262	-	(175)

B

Observations

A. Essentially the same results as previous slide

B. CT capacity in 2029 not replaced due to higher BTM solar, battery DLC and TOU

Stakeholder Scenario #11&12 (Results)

(CTP SS Geo+DER+ITC+SMR+no H2&CCS+no 29Gas) minus (CTP SS Geo+DER+ITC+SMR+no H2&CCS) Installed Capacity (MW)													
	Firm Dispatchable Resources							Dynamic Balancing Resources		Carbon-Free Energy Resources			
Year	Nuclear (MW)	Gas Combined Cycle (MW)	Gas Combustion Turbine (MW)	Gas Internal Combustion (MW)	LD Storage (MW)	Pumped Hydro (MW)	Geothermal (MW)	SD Storage (MW)	Demand Response (MW)	Solar (MW)	Wind (MW)	Energy Efficiency (MW)	Total (MW)
2026	-	-	-	-	-	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-	-	-	-	-	-
2028	-	-	-	-	-	-	-	-	-	-	-	-	-
2029	-	-	(172)	-	-	-	-	-	-	1	-	-	(171)
2030	-	-	-	-	-	-	-	23	-	22	-	-	45
2031	-	-	-	-	-	-	-		-	(0)	-	-	(0)
2032	-	-	-	-	-	-	-	-	-	-	-	-	-
2033	-	-	-	-	-	-	-	-	-	-	-	-	-
2034	-	-	-	-	-	-	-	-	-	-	-	-	-
2035	-	-	-	-	-	-	-	-	-	-	-	-	-
2036	-	-	-	-	-	-	-	-	-	-	-	-	-
2037	-	-	-	-	-	-	-	-	-	-	-	-	-
2038	-	-	-	-	-	-	-	-	-	-	-	-	-
2039	-	-	-	-	-	-	-	-	-	-	-	-	-
2040	-	-	-	-	-	-	-	-	2	-	-	-	2
2041	-	-	-	-	-	-	-	45	1	150	-	-	196
2042	146	-	-	-	-	-	-	-	1	(100)	(54)	-	(7)
2043	-	-	-	-	100	-	-	(114)	(0)	(92)	(47)	-	(153)
2044	-	-	-	-	(100)	-	-	117	(0)	11	-	-	28
2045	(146)	-	-	-	-	-	-	(71)	(2)	5	101		(113)
Total	-	-	(172)	-	-	-	-	(1)	2	(3)	1	-	(173)

A

B

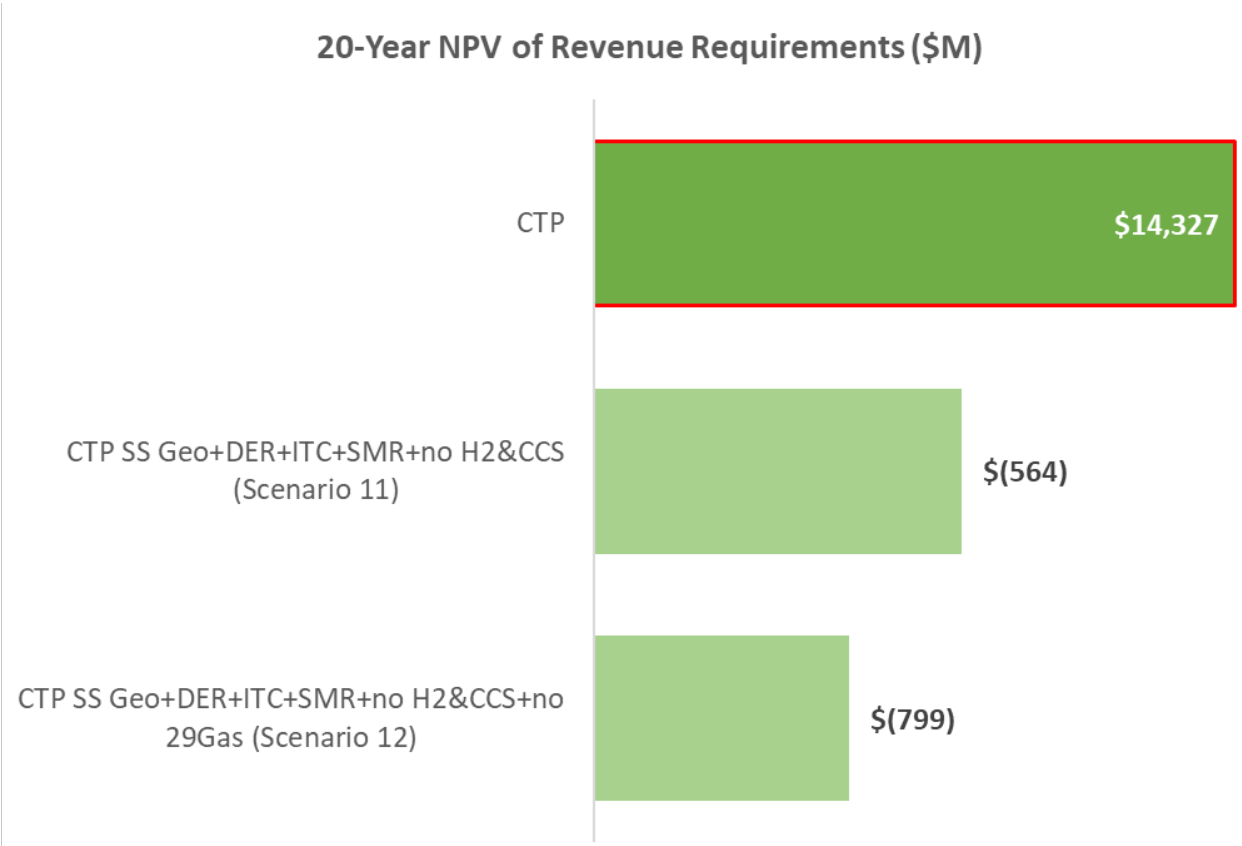
C

Observations

A. CT capacity in 2029 not replaced due to higher BTM solar, battery DLC and TOU rate reducing supply side need.
B. Capacity neutral otherwise
C. No impact on focus period

$235M reduction over scenario 11 in NPV mostly due to avoided CT cost.

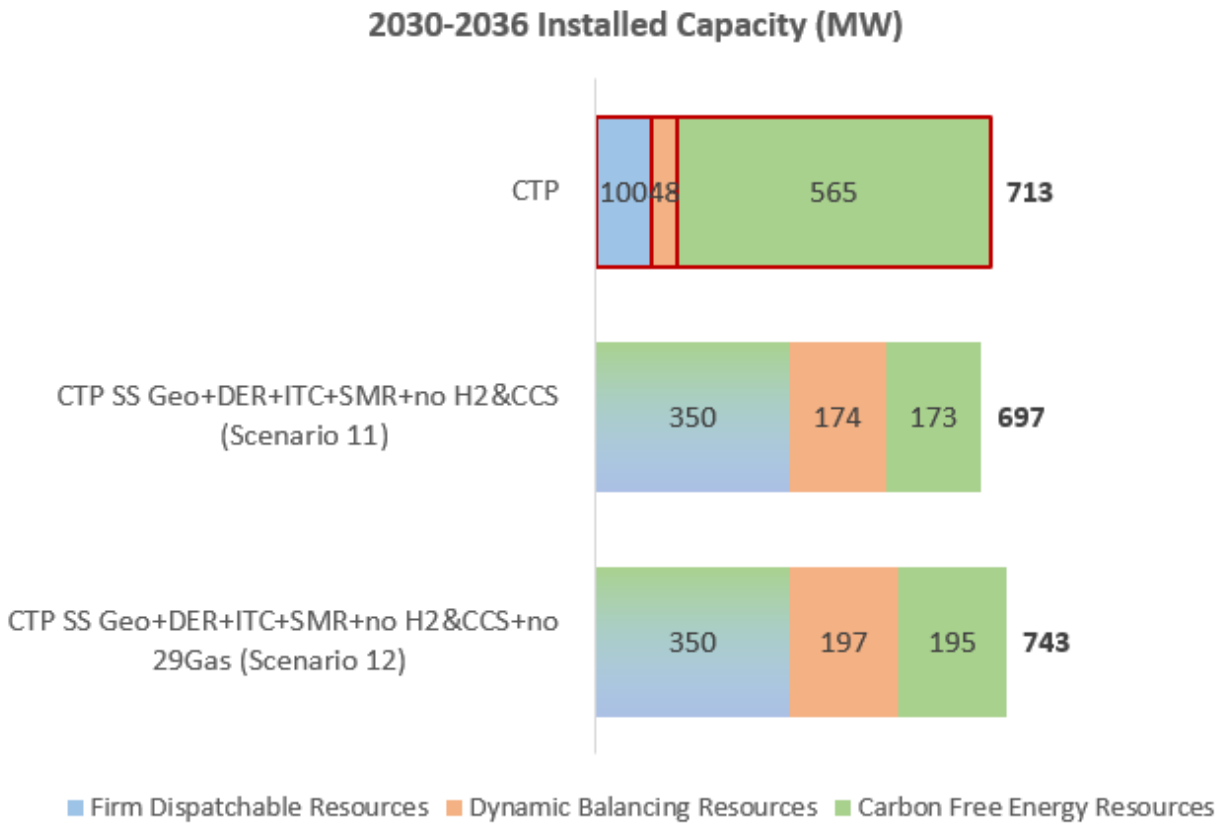
Stakeholder Scenarios #11&12 (Results)



Observations

- Scenario 11 yields $564M lower NPV driven by:
  - Higher Load Side Resources
    - High BTM solar adoption
    - High TOU participation
    - High Battery DLC potential
  - Lower Cost
    - ITC applied to geothermal
    - No H2 conversion cost for existing resources
    - Deferred additions of nuclear and LD storage
- Scenario 12 yields $799M lower NPV driven by Scenario 11 drivers plus:
  - Lower Cost
    - 2029 172 MW gas unit dropped

Stakeholder Scenarios #11&12 (Results)



Observations

- Scenario 11 vs. CTP
  - 350 MW enhanced geothermal is added
  - 100 MW less long duration storage
  - 126 MW DR
  - 392 MW less solar
- Scenario 12 vs. CTP
  - 350 MW enhanced geothermal is added
  - 100 MW less long duration storage
  - 126 MW DR, +23 MW short-duration storage
  - 392 MW less solar

Portfolio Considerations

Results are dependent on potentially unrealistic assumptions:

- **Low geothermal cost**
  - The assumed geothermal capital cost ($6100/kW at 2030) is well below technology forecast provided by PNM's consultant ($11165/kW at 2030).
  - Results dependent on ITC which is not available after 2035.
- **High BTM solar penetration**
  - The scenario assumes a higher level of BTM solar penetration (1035 MW at 2045) then currently forecast.
  - The capital cost is assumed paid by customers and therefore not reflected in the PNM modeling (resulting in a lower NPV).
- **High battery DLC potential**
  - The assumption of 50% battery attachment to new BTM solar, and 1% of existing solar installations is well above expectations (328 MW modeled by 2045).
  - The capital cost is assumed to be borne by customers and is not included in the PNM modeling (resulting in a lower NPV).

Questions