

NWPP RESOURCE ADEQUACY PROGRAM

LOAD SERVICE INFORMATION FORUM (LIF) MEETING #4

AUGUST 12, 2021



AGENDA

- » Status Update
- » Overview of Phase 2B Design
 - Forward Showing
 - Operations
 - Governance
- » Sign up details for non-binding program
 - Updated timeline
 - NDA
 - Data sharing
 - Cost allocation methodology
- » Next Steps



STATUS UPDATE

- » Detailed design document published and available here: <https://www.nwpp.org/resources/2021-nwpp-ra-program-detailed-design>

Comments will be taken through September 15th

- » SPP selected to provide Program Operator (PO) services

Forward Showing (including data collection and validation), modeling/analytics, and compliance reviews

Operations/real-time program operations and auditing

Manages continual technical and processes improvement

IT Systems

- » Stakeholder engagement

Stakeholder advisory committee, State Regulator outreach, Load Service Entity Outreach

1 by 1 outreach to interested entities



PHASE 2B DETAILED DESIGN

- Executive Summary
- Governance
- Forward showing
- Operations

Recognize this is a starting point for implementation, not a binding set of rules

- *things will still change*

PROPOSED GOVERNANCE APPROACH - OVERVIEW

Independent **Board of Directors** (BOD)

- › Once the initial structure of the board and program is established, the board has authority to approve budgets; provide direction and set priorities
 - › *Some limitations on board authority are permissible*
- › Point of compliance (entity that will have a compliance obligation to the RA Program) at the Load Responsible Entity (LRE)
- › Proposed governance preserves structures and functions of exiting NWPP program

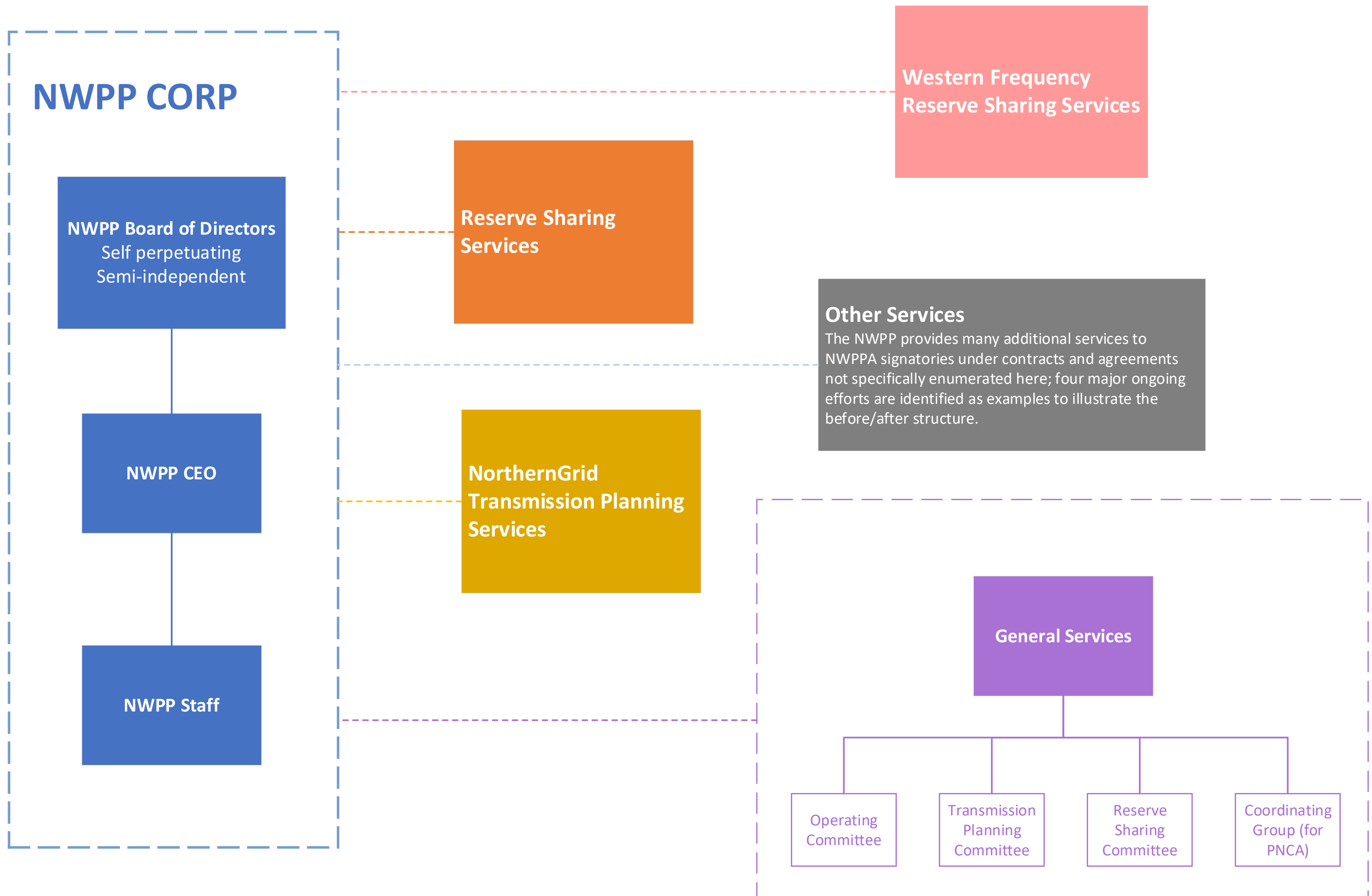
Participant Committee (RAPC) with influence

- › Substantive authority to modify amendments to the RA Program
- › Substantive authority to modify RA Program rules
- › **Subject to stakeholder right of appeal to independent board**

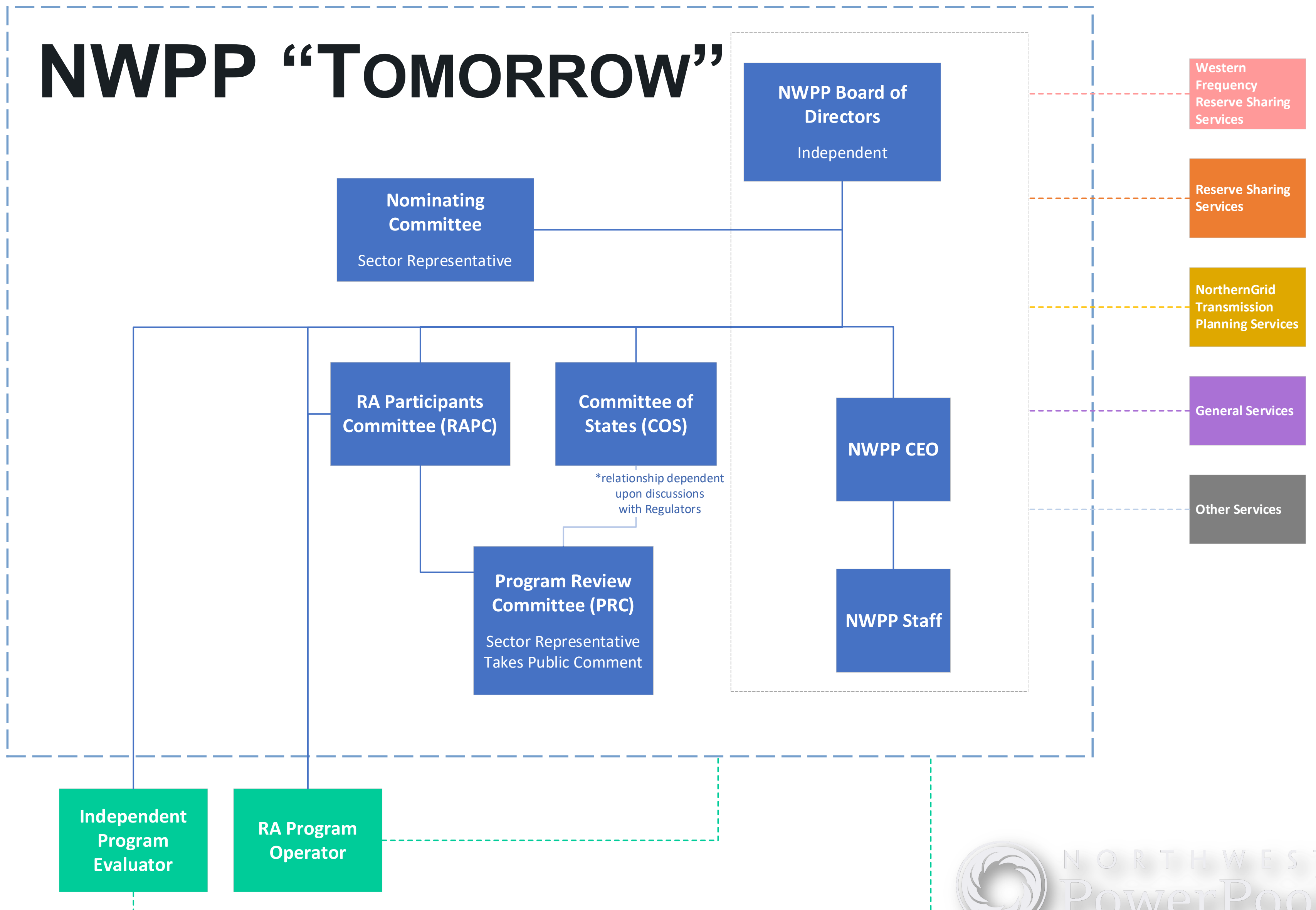
PROPOSED GOVERNANCE APPROACH - OVERVIEW

- › **Committee of States (COS)**– meeting through the Summer to refine the role of this committee
- › **Nominating Committee (NC)** – the members of the BOD will be selected by a NC comprised of multi-sector representatives.
- › **Program Review Committee (PRC)** – future changes to the program rules will be recommended through a multi-sector committee
- › **Independent Evaluator (IE)** – Reports to BOD for annual review of program

NWPP TODAY



NWPP “TOMORROW”



Snapshot of NWPP RA Program

Detailed Design: Forward Showing Program

Program Structure	Bilateral - Participants will continue to be responsible for determining what resources and products to procure from other Participants or suppliers
Compliance Periods	Two binding seasons: Summer (June 1 – Sept 15) and Winter (Nov 1 – Mar 15) Fall and Spring seasons would be advisory (no penalties for non-compliance)
Forward Showing Deadline	Participants will demonstrate compliance with FS reliability metrics seven months in advance of the start of the binding seasons - if notified of deficiency by the PO, entities will cure issues by three months prior to the start of the binding season
Reliability Metric	FS Program is designed to identify the capacity needed to meet a 1 day in 10 years loss of load expectation (LOLE) target for each season
Load Forecasting	Entities will forecast their own loads, working with the PO to use acceptable forecasting methodologies. PO will use load forecasts and historical data to identify a P50 (1-in-2) peak load for each month in the binding season - the highest monthly P50 will be used for all months of that season.
Planning Reserve Margin	Seasonal PRM will be determined for Summer and Winter seasons and expressed as a percentage of each Participant's identified seasonal P50 load forecast

Snapshot of NWPP RA Program

Detailed Design: Forward Showing Program

Resource Capacity Accreditation

Wind and Solar Resources: Effective Load-Carrying Capability (ELCC) analysis.
Run-of-River Hydro: ELCC analysis.
Storage Hydro: NWPP-developed hydro model that considers the past 10 years generation, potential energy storage, and current operational constraints.
Thermal: Unforced capacity (UCAP) method.
Short Term Storage: ICAP Testing – ability of the resource to maintain the value over the specified duration represents its capacity value.
Hybrid Resource: “Sum of parts” method where energy storage resource will use ICAP Testing and generator will use appropriate method as outlined above.
Customer Side Resources: Can either register as a load modifier or as a capacity resource.

Transmission

- › Rely on existing OATT frameworks to facilitate transmission-related requirements in FS and Ops - will not infringe on TSPs’ and BAs’ responsibilities, nor diminish Participants’ OATT responsibilities.
- › Demonstrate deliverability of resources claimed in the FS on NERC priority 6 or 7 transmission (firm, conditional firm, network service – in some conditions) - demonstrate at FS deadline having procured or contracted for transmission rights to deliver at least 75% of the resources (or contracts) claimed in the FS portfolio from source to load.
- › When sharing is forecasted in the Ops program, prepare to demonstrate firm transmission for resources not previously shown to have NERC priority 6/7 transmission.

Penalty for FS Non-Compliance

Deficiency payment based on cost of new entry (CONE) for a new peaking gas plant.

Snapshot of NWPP RA Program

Detailed Design: Operational Program

Framework for Accessing Pooled Capacity

Sequentially comparing forecasts to the FS metrics beginning six days before the preschedule day, identification of sharing events and required capacity holdback on the preschedule day, and energy deployments on the operating day

Accessing Entity:

- › Can only call on pool capacity when $\text{Load} + \text{Contingency Reserves} > \text{Forecasted peak load} + \text{Planning reserve margin (PRM)} - \text{forced outages} - \text{VER underperformance} + \text{VER over-performance}$
- › Participants can only access pooled capacity equal to the amount of load over their reliability metric

Providing Entity:

- › Administrator will ask those not experiencing loads over their RA obligations assist
- › Could request the difference between their RA obligations and forecasted load

Transmission and Deliverability

- › If PO forecasts a sharing event (i.e., one or more Participant is forecasted to be deficit), Participants will be expected to have sufficient firm or conditional firm transmission rights (or as applicable, 6NN transmission rights at the TSP's discretion) to meet their expected load plus their expected sharing requirement.

PROGRAM PARTICIPATION

- Choosing to participate in RA Program
- Commit to submitting data on time with defined schedule
- Sit on RA Participant Committee (RAPC)
 - › *Decision-making body - approves design changes*
 - › *Lead's their organization's engagement in all RA Program requirements (data submittal, showing, etc.)*
- Sit on Subcommittees (~10-12 hours/week of a senior resource) – *can opt out**
 - › *Operating Committee (RAPC OC)*
 - › *Additional subcommittees will be stood up to address the following and more:*
 - Prep for FERC Filing*
 - Consult on NWPP updates*
 - Aid in PO management and direction*
 - Facilitate implementation/business practice development*

*Participants can opt for a lower financial commitment and forfeit rights to participate on subcommittees

PROGRAM COSTS

Participation costs will cover the following:

- Setting up NB
- NB data validation
- NB modeling
- Stakeholder engagement
- Legal work for FERC filing*
- NWPP Board transition*

**These costs can be “opted out of” by entities wanting to experience program participation with less financial and resource commitment and a smaller role in program design and implementation. Again, this forfeits the right to serve of any RAPC subcommittee*

Costs will be split by all participants on a “House and Senate” basis

- 50% split pro-rata
- 50% split based on %P50 load

(P50 is the Participant load forecast that has a 50% probability of not being exceeded during the season for which it is applicable; the higher of a Participant’s two seasonal P50s will be used)

VERY APPROXIMATE EXAMPLE COST ALLOCATION

Phase	3A (Oct 2021 – Dec 2022)		3B (Jan 2023 – Sept 2025)	
Total Program Load	80,000 MW	60,000 MW	80,000 MW	60,000 MW
Approximate # of Participants	28	20	28	20
Large (~10000 MW)	\$800K	\$1.1M	\$1.5M	\$1.9M
Medium (~3500 MW)	\$395K	\$580k	\$735K	\$1M
Medium (~1000 MW)	\$240K	\$330K	\$445K	\$615K
Small (~100 MW)	\$185K	\$257k	\$340K	\$475K

- These are extremely approximate ranges – not exact numbers
- Meant to show an order of magnitude
- Allocation of costs will depend completely on how many entities sign up and what their P50 loads are
- Costs are by phase – not annual

VERY APPROXIMATE 3A PAYMENTS

Phase	2021				2022			
Total Program Load	80,000 MW		60,000 MW		80,000 MW		60,000 MW	
Approximate # of Participants	28		20		28		20	
Payment Dates	Due at signing (10/2021)	Remaining NTE*	Due at signing (10/2021)	Remaining NTE*	Due 1/2022	Remaining NTE*	Due 1/2022	Remaining NTE*
Large (~10000 MW)	\$144K	\$55K	\$195K	\$75k	\$430K	\$170K	\$580k	\$225k
Medium (~3500 MW)	\$71K	\$30K	\$95K	\$40K	\$213K	\$80K	\$290k	\$115k
Medium (~1000)	\$43K	\$17K	\$60K	\$25K	\$130K	\$50K	\$180K	\$70K
Small (~100 MW)	\$33K	\$13K	\$46K	\$20K	\$100K	\$39K	\$140K	\$55K

– *NTE = not to exceed; this budget covers things like prep for the FERC filing. These costs will be billed monthly as they accrued. These costs can be opted out of, but participants who take this option lose the ability to sit on work groups/sub-committees.

– These are extremely approximate ranges – not exact numbers

– Meant to show an order of magnitude

– Allocation of costs will depend completely on how many entities sign up and what their P50 loads are

– Costs would be lower for those opting out of RAPC subcommittee work

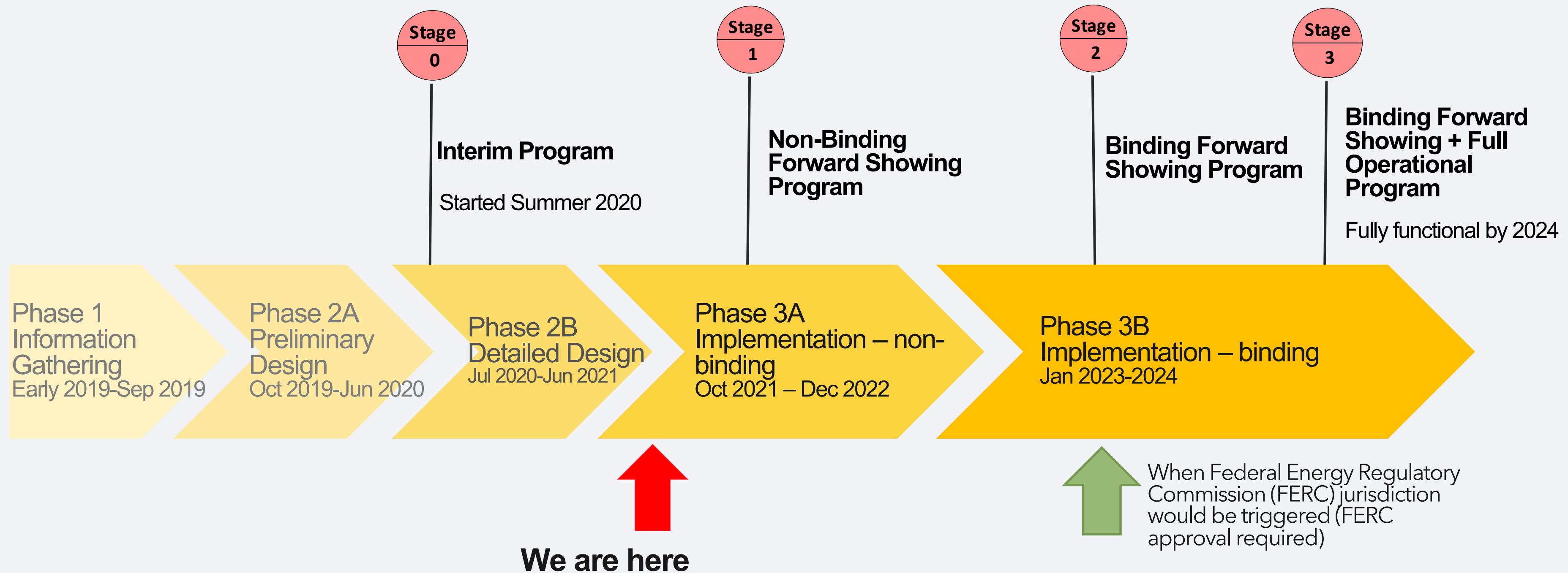
THRESHOLD FOR FUNDING

- Program will only proceed if enough participants (with large enough load) are signed on
- Will provide a maximum cost of the agreement prior to signing
- If too few join, we will need to reevaluate path forward and funding commitments

SIGN-ON TIMELINE NON-BINDING PROGRAM

- Signing participation agreements (as soon as 8/16)
 - › *Inviting LREs from across the West to participate in the next phase (“3A”) – this is an expansion of participation as compared to past project phases*
 - › ***Signing window: August 16 – September 30***
- Those signing on would also be requested to sign an NDA

TIMELINE



Immediately following 3A Agreements:

- » Collecting and validating data from 3A participants

Necessary to run modeling for adequacy metrics (PRM and resources' qualified capacity contributions)

Example of the type of data we will need from Participants (not a complete list, but indicative)

- » Generating unit information (nameplate, generator type, fuel type, start/stop time etc.)
- » Historical generation for VERs
- » Historical load
- » Historical temperature/weather (I believe this was included but will confirm)
- » Load forecast
- » Hydro QCC
- » GADS data for calculating effective forced outage rates
- » Contracts (imports/exports both within and outside of the footprint)
- » Transmission rights (what will be used to get resources to load)
- » Testing information for resources without historical performance data

- » Some data will be available as a result of the Forward Showing modeling

What data is available to be shared (and with whom) and what is confidential is still under consideration

Example of the type of data anticipated to be outputs of the non-binding program (either by PO modeling or through PO work with participants)

- » Regional PRM
- » Qualified Capacity Contributions by resource type and zone for all resources
- » Effective Load Carrying Capacity Curves for VER resources
- » Validation of Individual Commercial Transactions (purchases and sales)
- » Preparation of a non-binding FS Portfolio for Winter 2022-2023 and Summer 2023
- » CONE penalty calculation
- » Net Program Import/Exports

» RELIABILITY

Ensure sufficient resources are installed and committed to reliably serve demand, during stressed grid and market conditions (capacity critical hours), with a high degree of confidence

» COST SAVINGS

Unlock the benefits of diversity in supply and demand in a safe and equitable way

» IMPROVED VISIBILITY & COORDINATION

Enable members to make fully informed RA planning decisions, using best practice approaches

PARTICIPATION BENEFITS

STAGE 1 NON-BINDING

- Opportunity to participate in most influential stage of program implementation
- Understanding individual RA position in advance of the future binding program

NEXT STEPS

Moving into Phase 3A (beginning implementation)

- October 2021-December 2022
- Stage 1: Non-Binding Forward Showing Program
 - › *Perform 2 FS Showings (turn portfolio in to Program Operator): Winter 2022, Summer 2023*
- Preparation for later phases
 - › *Prepare for FERC filing (filing targeted for March 2022)*
 - › *Prepare for NWPP independent board (transition in 2023)*
 - › *Work through outstanding design considerations for Operations program*