PNM EIM GO-LIVE PRESENTATION
Sheila Mendez| June 29, 2021

PNM EIM FOOTPRINT

Peak Load - ~2600MW
- 3rd Parties make up over 25-30% of the BA load

PNM Participating Resources (3,260 MW total with 995MW of VERs)
- 25 PV sites
- 10 Natural Gas Resources
- 5 Wind Farms
- 4 Coal Units
- 1 Geothermal Unit

Tri-State Participating Resources (532 MW)
- 2 PV sites
- 4 Natural Gas Resources
- 1 Coal Unit

3rd Party Non-Participating Resources (378 MW)
- 1 Wind Farm
- 2 Hydro Plants
- 1 Natural Gas Resource

PNM Service Territory

EIM PROGRAM TEAM

>100 Team members

EIM Executive Steering Committee

Executive Sponsor
Business Unit Vice Presidents

Program Management Office

Program Directors
Program Manager
Project Managers
Organizational Change Management
Financial Analysis

Partners

Strategic Consulting Partner
Solution Providers
3rd Party Entities (Network Customers)

Merchant/Wholesale Power Marketing

Day Ahead Traders
Real-Time Traders
Merchant Analysts

Power Operations

Generation Desk
BA Operators
EIM Operators
EIM Performance Analysis
Operations Engineering
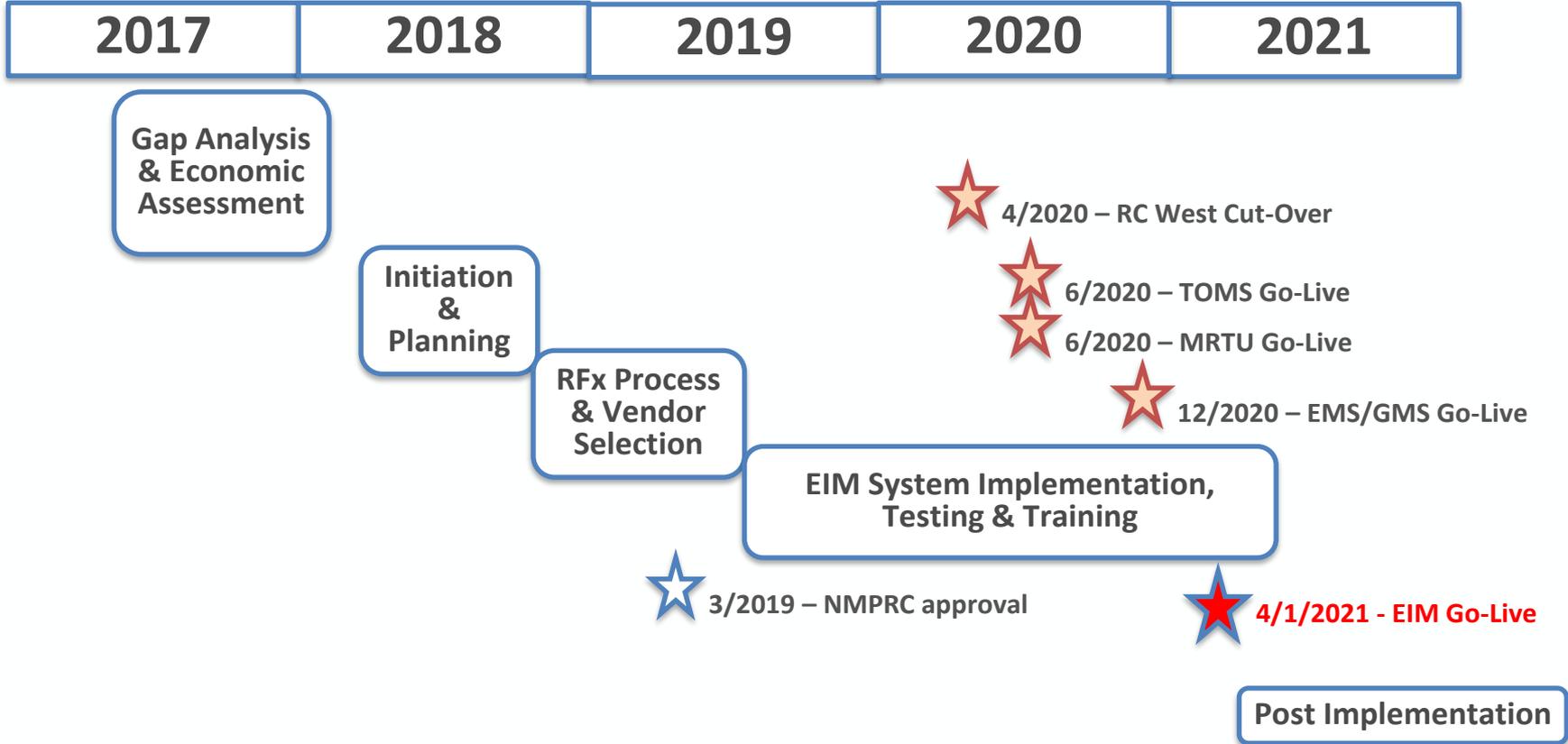Transmission Operators

CFO

Settlements
Accounting
Pricing
Utility Margin

Supporting Teams

IT/OT
HR
Metering
Compliance
Sourcing/Procurement
Legal & Transmission
Contracts

PNM

PNM EIM PROGRAM TIMELINE

2017	2018	2019	2020	2021

Gap Analysis & Economic Assessment

Initiation & Planning

RFx Process & Vendor Selection

EIM System Implementation, Testing & Training

⭐ 4/2020 – RC West Cut-Over

⭐ 6/2020 – TOMS Go-Live

⭐ 6/2020 – MRTU Go-Live

⭐ 12/2020 – EMS/GMS Go-Live

⭐ 3/2019 – NMPRC approval

⭐ **4/1/2021 - EIM Go-Live**

Post Implementation

KEY EVENTS FOR PNM PARTICIPATION

- 20 new positions to support EIM Operations
  - EIM Manager
  - EIM Entity Desk
  - After the fact analytics
  - Settlements
  - IT/OT Support & Engineering
  - Training

- Multiple pre-requisite projects ran in parallel with EIM Program
  - EMS/GMS upgrade
  - Transmission Outage Management System Replacement
  - MRTU and Generation Optimization
  - Generation Dispatch desk transfer from Merchant to Operations
  - RC West Implementation

EIM GO-LIVE AND OPERATIONAL SUMMARY

GO-LIVE ON 4/1/2021

- 100% remote since 3/2020 and a remote go-live
- Dual go-live with LAWDP
- Transition period smooth and uneventful
- Started Dynamic Transfers in HE 4 for 10 MW and increased from there
- Dynamic ETSRs have Maxed out at 500MW exporting and almost 400MW for importing during the first month
- Over 55,000 MWh of Net Dynamic ETSR Transfers in first month
- Continued improvement on passing Balancing Test – challenges have been around needing to manage numerous manual dispatches to respect other owner shares of some resources.

CONSIDER FOR FUTURE EIM IMPLEMENTATIONS

- Caution with allowing more participants to enter the market at the same time

- More focused attention on edge cases with resources.
    - Direct Current (DC) ties to other interconnections
    - JOU/MSG resources
    - Dynamic and Pseudo-Tied resources from EIM Entity to CAISO.

- More focus on telemetry checkout with CAISO

- Continue to monitor and improve VER forecasting and availability

PNM EIM CHANGE MGMT. LESSONS LEARNED

People

- To avoid dependency on consultants, early and constant engagement by management and staff…Own It
- Hire new positions earlier so they can benefit from learning through the program
- ID and bring other staff or contractors earlier in the project
- Manage daily operational work-load for project team members
- Mitigation plan for attrition during the program

Planning, Training, & Testing

- Project plan should include success criteria at each gate and constantly communicate milestone objectives
- COVID prohibited more on-site training.
- More structured training on technical applications
- Adjust workload for internal trainers to learn content, develop materials, practice delivery and deliver end-user training
- Schedule UAT (user acceptance testing) when software is ready

OCM & Readiness

- More road-shows to communicate about EIM in addition to the newsletters
- Realize project fatigue through conversations and surveys and address timely
- COVID required contractors, CAISO, and staff to learn, test, and deploy remotely