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TEPPC 2022 Common Case – Load, EE, and DSM Assumptions

December 16, 2011

Webinar Format

- Please mute your line until Q&A periods
- “Raise hand” to ask a question
  - The moderator will call on you at which time you can un-mute your line
- Written questions are accepted at any time
  - Use the “chat box”

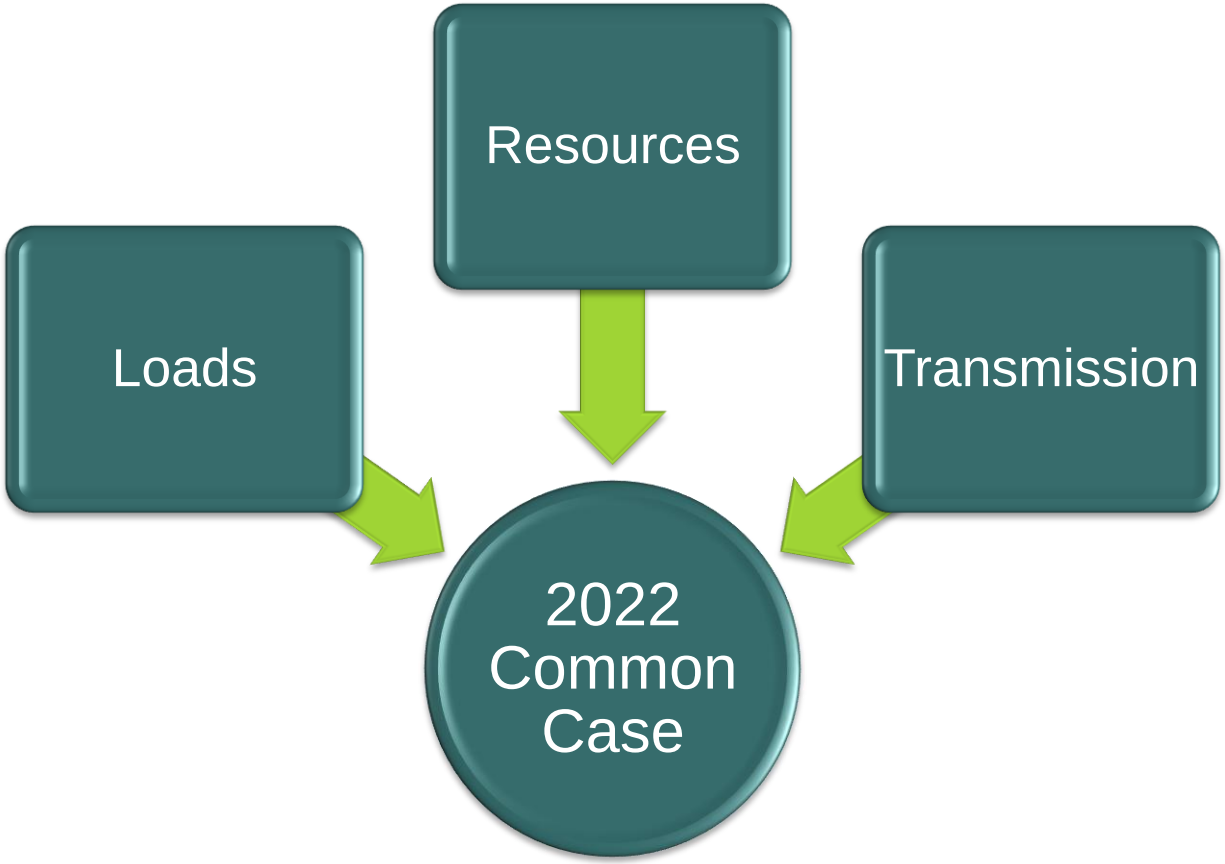
Glossary

DSM/DR – Demand-side management/Demand response
EE – Energy efficiency
IRP – Integrated Resource Plan
LBNL - Lawrence Berkeley National Laboratory
LRS – WECC Loads and Resources Subcommittee
NREL – National Renewable Energy Laboratory
OTC – Once through cooling
RPS – Renewable Portfolio Standard
RTEP – Regional Transmission Expansion Planning Project (activities funded by the DOE grant)
SCG – Subregional Coordination Group (group of SPGs)
SPG – Subregional Planning Group
SPSG – Scenario Planning Steering Group (WECC multi-constituency steering group)
SPSC – State and Provincial Steering Committee (State steering group)
TAS – Technical Advisory Subcommittee of TEPPC
TEPPC – Transmission Expansion Planning and Policy Committee
TSS – WECC Technical Studies Subcommittee
VGS – WECC Variable Generation Subcommittee
WREZ – Western Renewable Energy Zone

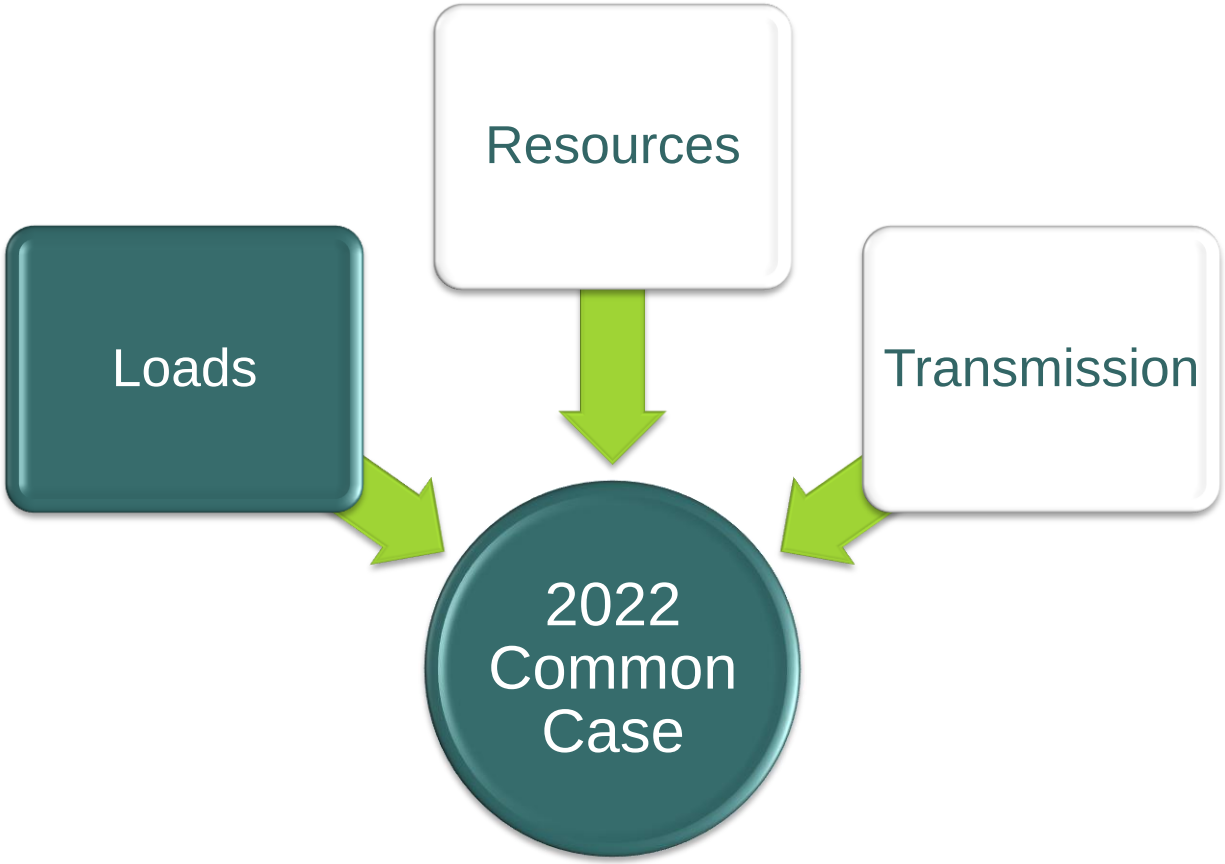
Outline

- Balancing Authority (BA) load forecasts
- Energy efficiency adjustments to the BA load forecasts
- Demand response adjustments to the BA non-firm load forecasts
- Demand response dispatch assumptions for production cost modeling

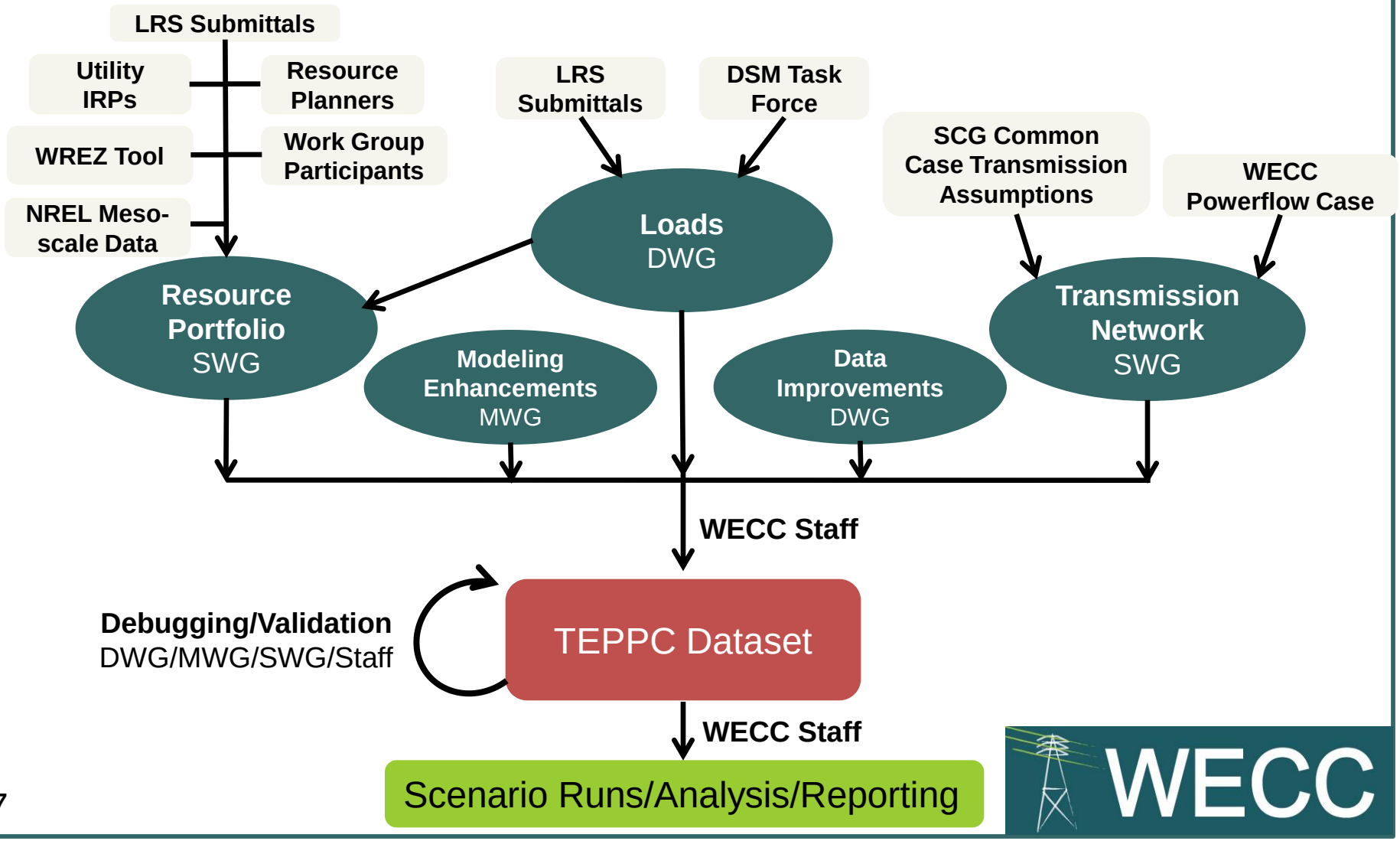
2022 TEPPC Common Case – Major Assumptions



2022 TEPPC Common Case – Load Assumptions



Dataset Building Activities



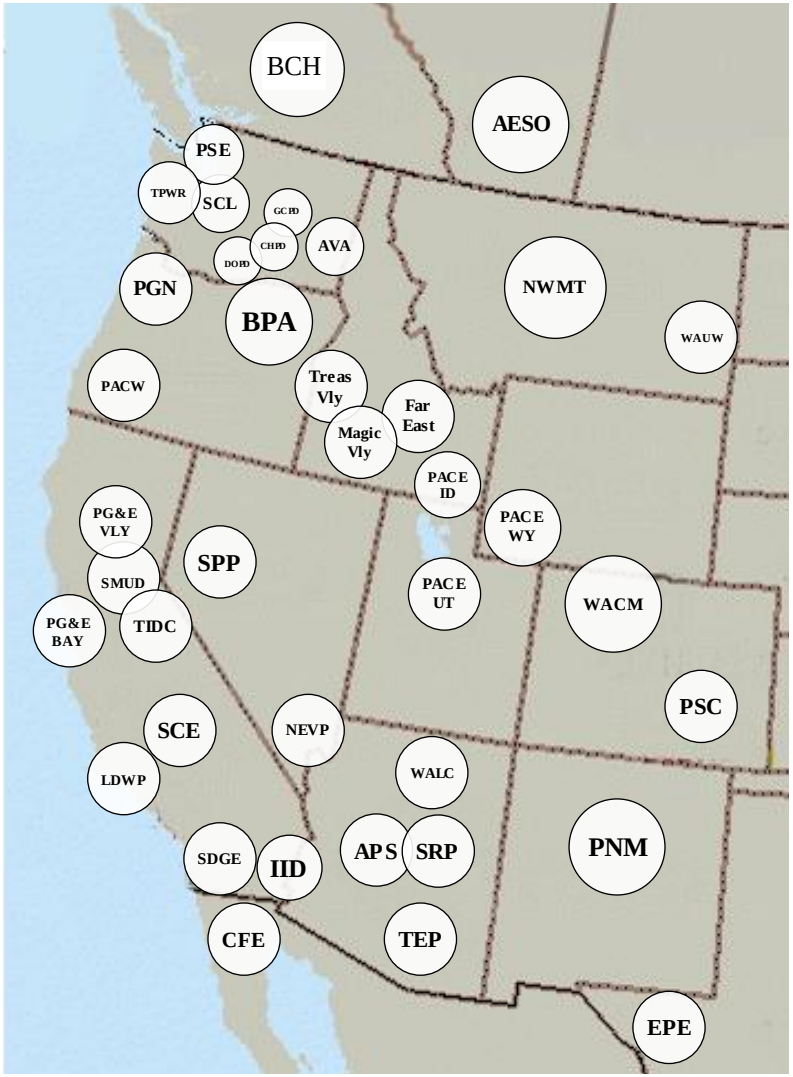
Balancing Authority Load Forecasts

- Provided to WECC by the BAs and forwarded to NERC and FERC as required under the FERC-approved NERC Standards
- Brings together the Load Serving Entities (LSEs) forecasts inside each respective BA
  - LSEs within each BA provide the BA with their load forecast, who in turn provides the BA forecast to WECC's Loads and Resources Subcommittee (LRS) each year
  - 32 WECC BAs with loads

Balancing Authority Load Forecasts

- 10-year forecast
- 1-in-2 (50% or median) forecast
- Specified on an annual and monthly energy (GWh) and peak (MW) basis
- 2010 BA forecasts provided a starting point for the 2022 TEPPC Common Case
  - 2021 peak and energy forecasts were extrapolated to 2022 and adjusted for incremental EE assumptions (described later)
- Adjusted 2022 peak and energy forecasts were then applied to 2005 historic hourly shapes

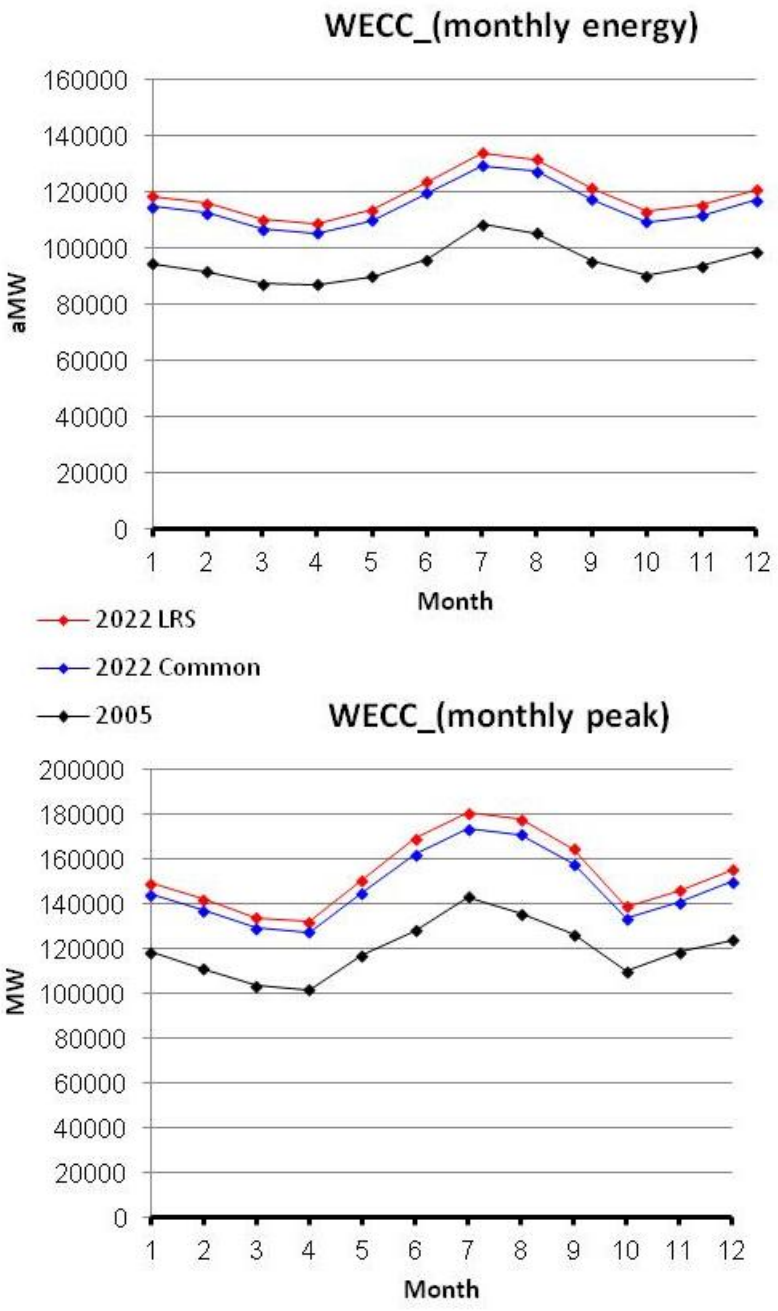
TEPPC Load Bubbles



Legend

AESO	Alberta Electric System Operator
APS	Arizona Public Service
AVA	Avista
BCH	British Columbia Hydro
BPA	Bonneville Power Administration
CFE	Comision Federal de Electricidad
CHPD	Chelan Co PUD
DCPD	Douglas Co PUD
EPE	El Paso Electric
Far East	Far East (Idaho Power)
GCPD	Grant Co PUD
IID	Imperial Irrigation District
LDWP	Los Angeles Dept of Water & Power
Magic Vly	Magic Valley (Idaho Power)
NEVP	Nevada Power
NWMT	Northwestern Montana
PACW	PacifiCorp West
PACE ID	PacifiCorp East – Idaho
PACE UT	PacifiCorp East – Utah
PACE WY	PacifiCorp East -- Wyoming
PG&E Bay	Pacific Gas & Electric Bay Area
PG&E VLY	Pacific Gas & Electric Valley Area
PGN	Portland Gen Electric
PNM	Public Service New Mexico
PSC	Public Service Colorado (Xcel)
PSE	Puget Sound Energy
SCE	Southern California Edison
SCL	Seattle City Light
SDGE	San Diego Gas & Electric
SMUD	Sacramento Municipal District
SPP	Sierra Pacific Power
SRP	Salt River Project
TEP	Tucson Electric Power
TIDC	Turlock Irrigation District
TPWR	Tacoma Power
TreasVly	Treasure Valley (Idaho Power)
WACM	Western Area Power Admin Colorado/Missouri
WALC	Western Area Power Admin Lower Colorado
WAUW	Western Area Power Admin Upper Missouri

2022 Common Case Load Assumptions



TEPPC Bubble	Annual Energy (GWh)	TEPPC Bubble	Annual Energy (GWh)
AESO	114,180	PG&E_BAY	46,667
APS	42,745	PG&E_VLY	62,891
AVA	14,673	PGE	23,463
BCH	66,325	PNM	17,169
BPAT	53,972	PSCO	47,266
CFE	14,950	PSEI	26,485
CHPD	4,056	SCE	109,736
DOPD	1,975	SCL	10,751
EPE	10,935	SDGE	23,631
FAR EAST	3,040	SMUD	17,491
GCPD	5,177	SPPC	12,803
IID	4,336	SRP	36,091
LDWP	31,499	TEPC	14,999
MAGIC VLY	5,327	TIDC	2,863
NEVP	27,030	TPWR	5,480
NWMT	11,390	TREAS VLY	11,278
PACE_ID	4,460	WACM	30,513
PACE_UT	38,195	WALC	7,622
PACE_WY	13,889	WAUW	856
PACW	22,914	WECC	999,120

EE and DSM Assumptions

- Presented by Galen Barbose (EE) and Andy Satchwell (DSM)
  - Lawrence Berkley National Laboratory- Electricity Markets and Policy Group
  - Technical leads for TEPPC's Demand-side Modeling Task Force (DSMTF) and the SPSC's Demand-side Management Work Group
- To view LBNL's presentation, please open webinar slides 2 of 2

Upcoming Webinars

- Detailed explanations of major assumptions incorporated into the 2022 Common Case
- Scheduled for Friday mornings, 10am-noon MST:
  - January 6th - Conventional and Renewable Resource Assumptions (including retirements)
  - January 13th - Special Modeling Techniques – Reserve Requirements and Cost of Cycling Parameters
- Past webinars and links to recordings:
  - December 2nd – Case Development Process and Summary of Modeling Assumptions
  - December 9th – Common Case Transmission Assumptions

Questions?

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