

Control Area Operation for RTO West

RTO Transmission Reliability
&
Your Generation Management

Market Model

- RTO (Transmission)
 - Direct access to generation services to protect transmission reliability
- Generation Owners (Power)
 - Manage your generation in order to optimize Resources

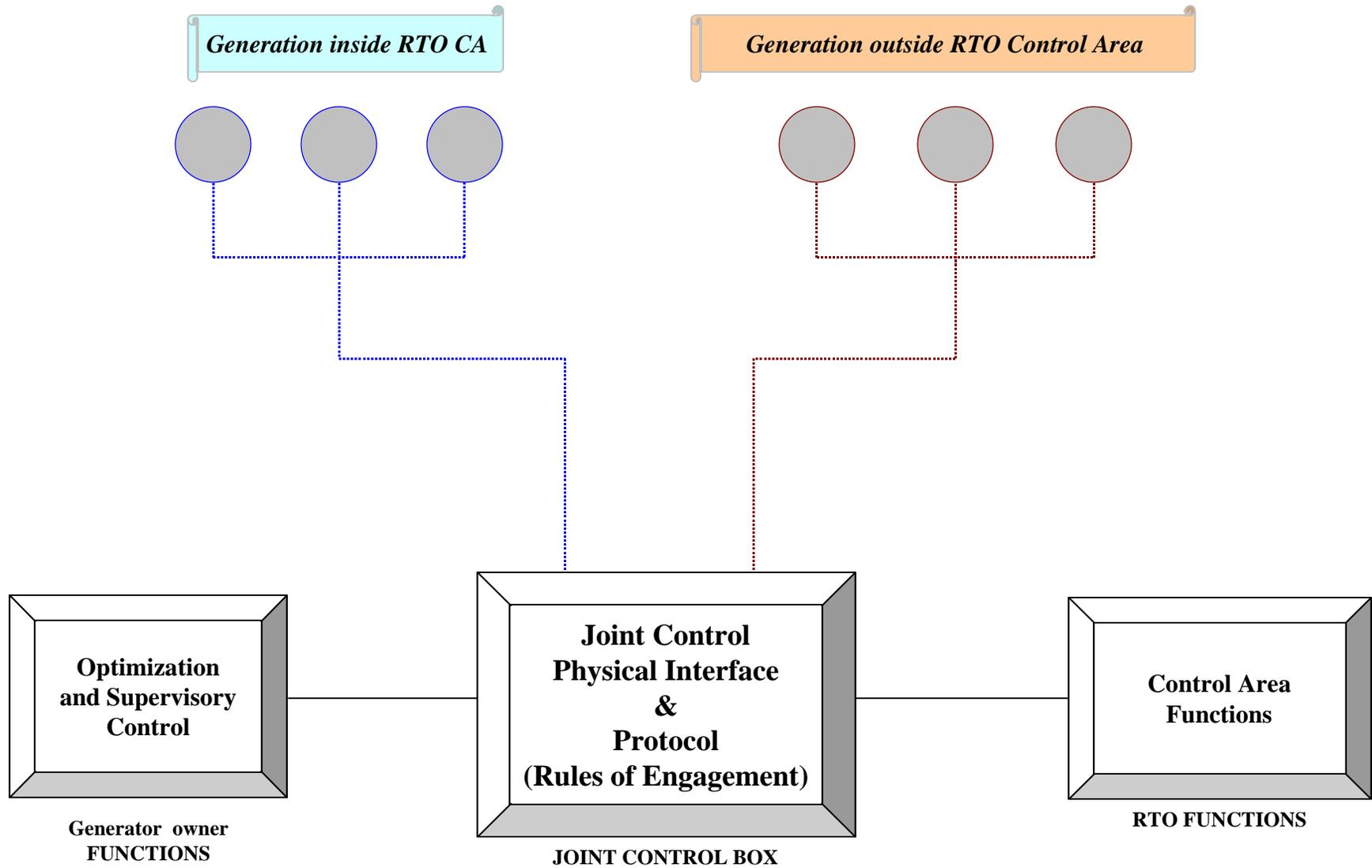
Fundamentals

- The RTO West Control Area needs visibility of generation to protect transmission reliability.
- The generation owners need to optimize their assets. (System response vs. Unit response, Hydro coordination)
- The generation owners want the ability to market products and services inside, and outside the RTO West CA and to other RTOs.

Principles

- The RTO doesn't own any generation resources, but needs access for reliability.
- The RTO gets direct control of generation for reliability when needed.
 - i.e., for emergencies or to relieve line overloading
- The Generation Owners will manage their assets, optimize resources
- The Generation Owners will provide reliability services and products (Interconnected Operating Services) to the RTO according to the Ancillary Services Market or with bilateral contract for services.
 - The Generation owners will provide these services on a system basis, or in zones as required.
 - All services will be provided for a fee or provided through an ancillary services market.
 - Generation Owners will be able to participate in the RTO ancillary services market.
- The Generation Owners will be able to supply energy and IOS Services to other control areas and other RTOs.

ONE VISION THAT ALLOWS GENERATION MANAGEMENT AND RTO CONTROL



I AM A CONTROL AREA NOW, WHY CHANGE?

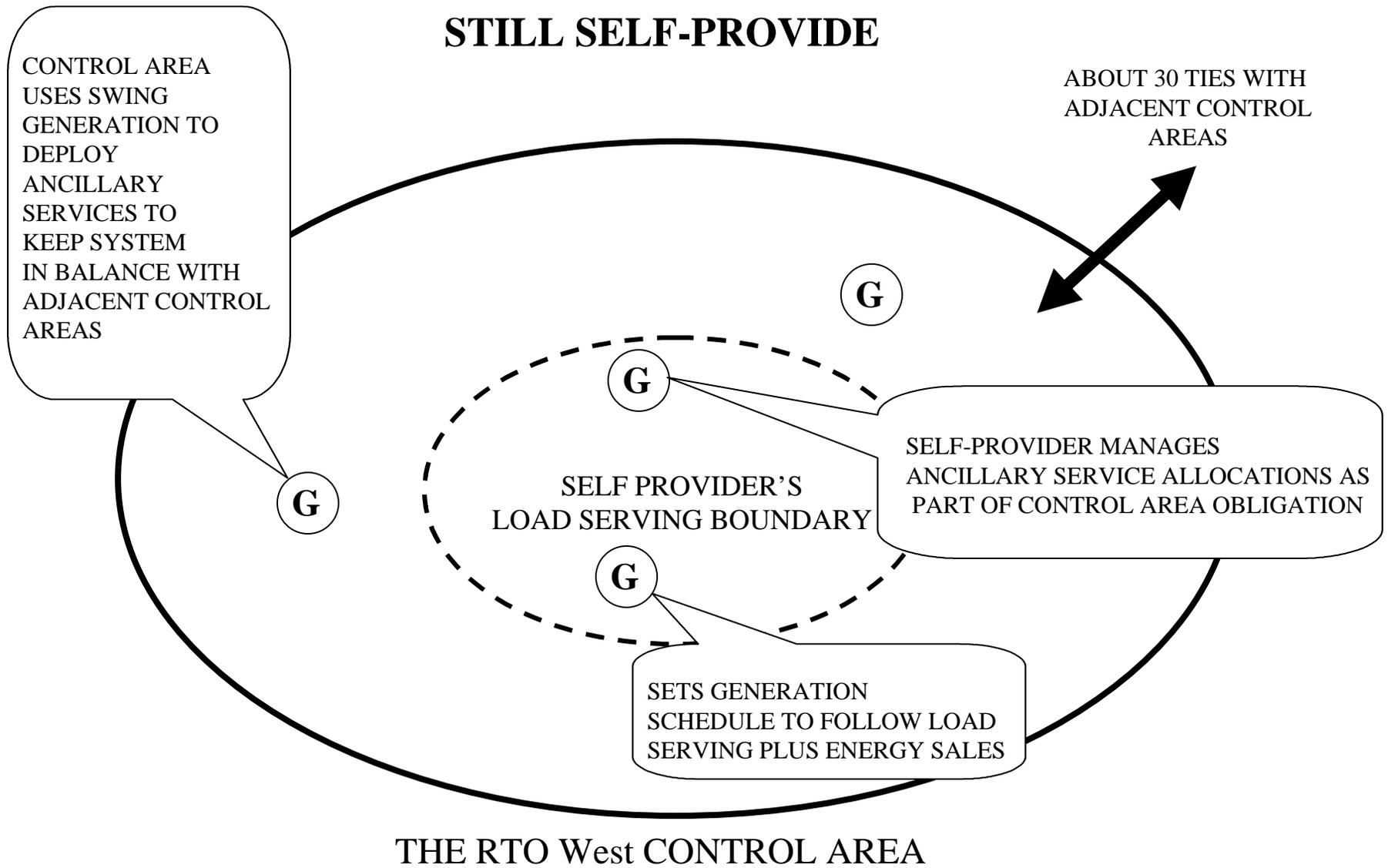
- **AVOID COMPLICATIONS INHERENT WITH CONTROL AREAS**
 - 500 INTERCHANGE CONTROL CIRCUITS REDUCED TO 30+
 - O&M SAVINGS DUE TO ELIMINATION OF INTERCHANGES
 - BOUNDARY CROSSING TRANSACTIONS ONLY APPEAR AT RTO West
 - CHECK OUT SCHEDULES THROUGH SINGLE POINT OF CONTACT
 - ONLY RTO West HAS RESPONSIBILITY TO MAINTAIN SYSTEM FREQUENCY & TIME ERROR
 - INADVERTENT INTERCHANGE PAYBACK BECOMES RTO West PROBLEM.
 - NO NERC COMPLIANCE REPORTS THAT APPLY TO CONTROL AREAS
 - NO OVER CONTROL TO MEET CPS (CAPACITY RETURNED TO YOU)

AVA	27	PGE	47
IPC	37	PSE	55
MPC	18	SPP	17
PACE	44	NPC	47
PACW	37		
		BPA	89

INCENTIVES TO SELF-PROVIDE INSIDE A CONTROL AREA

- LEAVES COMMUNITY CONTROL PROBLEMS TO THE CONTROL AREA
 - PICK EACH ANCILLARY SERVICE YOU WANT TO SELF PROVIDE
 - GET AN ALLOCATION FROM RTO West IN REAL-TIME
 - MINIMIZE YOUR EXPOSURE TO CAPACITY & ENERGY YOU WANT TO MAKE AVAILABLE
- CONTINUE BILATERAL GENERATION CONTROL
 - GENERATE FOR YOUR LOAD SERVING CUSTOMERS WITH FIXED AND VARIABLE CONTRACTS (LOAD FORECASTS)
 - SERVE YOUR ENERGY MARKET CONTRACTS
 - PROVIDE GENERATOR FREQUENCY BIAS RESPONSE

GETTING TO ONE CONTROL AREA & STILL SELF-PROVIDE



SETTLEMENT CONCEPT

- LOAD SERVING ENTITY SETTLES WITH GENERATOR FOR FORECASTED LOAD
- LOAD SERVING ENTITY SETTLES WITH CONTROL AREA BASED ON METERED LOAD (ERROR FROM FORECAST)
 - CONTROL AREA SETTLES WITH SWING GENERATORS THAT PROVIDE ANCILLARY SERVICE
- IF TIE LINE FLOWS OUT OF BALANCE (NET TIME ERROR CHANGED), THEN ADDITIONAL SETTLEMENT REQUIRED
 - FOR UNDER-FORECAST PERIODS, GENERATOR PAID FROM ENERGY IMBALANCE COLLECTIONS.
 - FOR OVER-FORECAST PERIODS, GENERATOR SELLS CONTROL AREA ENERGY NOT USED TO PAY FOR ITS NET LOAD SERVING ENTITY REVENUE LOSS.