

# Automatic Generation Control (AGC) Customer Workshop

5/10/2024



# Agenda/Overview

- Brief overview of Automatic Generation Control
- AGC Software Upgrade
  - Why it must be done now
  - Why it will take over 2 years to implement
- Moratorium on New Projects
  - Impacted potential projects
  - Non-impacted projects

# Automatic Generation Control (AGC)

- AGC is the computer system used to control the FCRPS generation to ensure that BPA closely meets its load and export requirements at all times.
- If load in the BPA Balancing Authority (BA) increases, AGC increases the requests to the plants on control to meet that need.
- If load in the BPA BA decreases, AGC decreases the requests to the plants on control to meet that need.

# AGC Software Upgrade

- BPA is in the process of upgrading its AGC software in order to maintain reliable operations.
- The need to upgrade AGC is an immediate need, it cannot be delayed.
- Currently operating on a very old platform that is close to end of life and will no longer be supported.
- Upgrade was already delayed over 4 years due to Grid Modernization and entry into the WEIM.

# AGC Software Upgrade

- Software upgrade will take at least two years due to the complexity of the algorithms used to control BPA's system.
  - Many of the customizations in BPA's AGC are not in the standard AGC product and will therefore need to be programmed into the new AGC system.

# Customer Notification

- While beginning work on the upgrade, it was not known how extensive the work would be.
  - As the upgrade project began, it was realized that all AGC engineers will need to be focused on the upgrade with no time to develop other projects.
    - This issue cannot be solved by hiring additional personnel. It takes a significant amount of time for a newly hired individual to be able to program in the AGC system.
  - Once it was realized that BPA could not accept new development work, BPA notified entities who had in-flight projects that BPA had stopped work.
  - As soon as BPA realized that all customers had not been notified, BPA sent a Tech Forum notice (5/2/24).

# Impacts of AGC Software Upgrade

- If the upgrade is not completed prior to end of life and loss of support of the AGC software, the reliability of BPA's system will be at risk. BPA's AGC engineers are fully deployed with the upgrade process.
- This causes the issue that no new projects can be introduced to BPA that will cause the AGC engineers to stop working on the upgrade in order to implement the new project(s).

# Impacts of Moratorium

- **Projects affected**
  - New requests for self-supply of contingency reserve
  - Utilization of non-Federal resources for regulating/balancing reserve
  - Requests for parties to become BPA EIM Participating Resources
  - Any other project that would require modifications to AGC software
- **Projects not affected**
  - New generator connection
  - New interchange points
  - BA moves
- **Projects that BPA may be able to implement on a case by case basis**
  - New Dynamic schedules



# Questions?

- Please submit any questions, comments or concerns to [techforum@bpa.gov](mailto:techforum@bpa.gov) with the subject line “AGC” and cc your Transmission Account Executive.