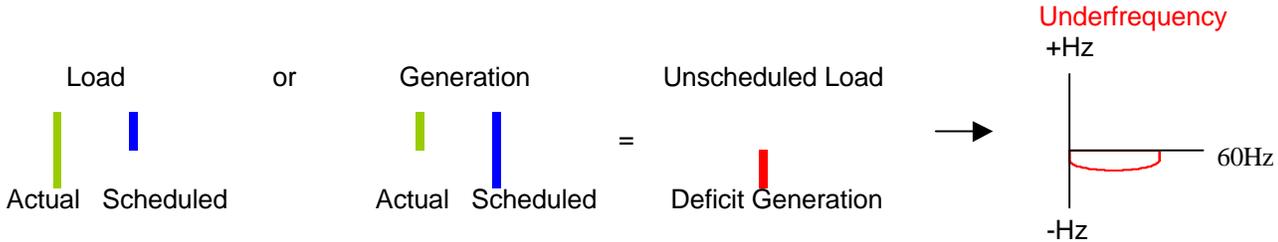


1. THE POWER/MISO MOTION ENCOURAGES CONSTANT UNDERSCHEDULING OF LOAD AND
 OVERSCHEDULING OF GENERATION AND THEREFORE CAUSES UNDERFREQUENCY.



The Power/MISO Motion effectively sets the Frequency Contribution Component (FCC) equal to:

- **minus two times the value of the energy** in the case of **overfrequency**. This makes the sum of the energy value and the FCC equal to minus the energy value. This confers a **huge reward** [Value (energy)] for underscheduling load or overscheduling generation and a **huge penalty** for overscheduling load or underscheduling generation.
Overfrequency:
 $\text{Value (unscheduled power)} = \text{Value (energy)} + \text{Value (FCC)} = \text{Value (energy)} - 2 \text{ Value (energy)} = - \text{Value (energy)}$
 $\text{Value (-unscheduled power)} = \text{Value (-energy)} + \text{Value (-FCC)} = - \text{Value (energy)} + 2 \text{ Value (energy)} = \text{Value (energy)}$
- **zero** in the case of **underfrequency**. This makes the sum of the energy value and the FCC equal to the energy value. Accordingly, the Power/MISO motion imposes no penalty for underfrequency, making the value of scheduled and unscheduled power the same.
Underfrequency:
 $\text{Value (unscheduled power)} = \text{Value (energy)} + \text{Value (FCC)} = \text{Value (energy)} + 0 = \text{Value (energy)}$
 $\text{Value (-unscheduled power)} = \text{Value (-energy)} + \text{Value (-FCC)} = - \text{Value (energy)} + 0 = - \text{Value (energy)}$

Accordingly, there is **only profit** and no penalty for underscheduling load or overscheduling generation, either of which is the cause of underfrequency.

Cause of the Power/MISO underfrequency problem/bias: the Power/MISO motion sets no penalty or reward during **underfrequency** because it **makes the FCC equal to zero** whether overscheduling or underscheduling.

2. THE POWER/MISO MOTION IS UNFAIR TO OVERGENERATION AND OVERLY GENEROUS TO OVERCONSUMPTION. THIS IS OPPOSITE THE EMPHASIS IN RELIABLE OPERATIONS.

By setting **FCC = - 2 Value (energy)** during **overfrequency**, the Power/MISO Motion sets **too big a penalty** or **too big a reward** during **overfrequency**. By setting **FCC = 0** during **underfrequency**, the Power/MISO motion is consequently

- unfair to **overgeneration** for conferring **too big a penalty** during **overfrequency** and no reward during **underfrequency**.
- too generous to **overconsumption** for conferring **too big a reward** during **overfrequency** and no penalty during **underfrequency**.

3. IMPOSSIBILITY OF SETTING A FREQUENCY DEADBAND UNDER THE POWER/MISO MOTION

It is impossible to widen a frequency deadband upper limit to be fairer to generation, say, to the point where the NERC-defined FCC would normally be just "FCC = -Value (energy)" and the Value of overgeneration would normally begin being a negative number. That is because the Value of energy is constantly changing. So a single deadband upper threshold level cannot be found (under the Power/MISO Motion) below which overgeneration would keep some of its otherwise positive value to the generator. That is because the Value of energy is constantly changing.

Furthermore, the effort to widen a frequency deadband only allows an increasing amount of economic unfairness inside the deadband either by allowing more inadvertent not to be recorded within the deadband or by allowing more inadvertent to accumulate within the deadband of unlimited size and at high prices, and to be paid back at low prices,--precisely the well-known economic abuse the NAESB Inadvertent Payback Standard is supposed to eliminate, not perpetuate.