

# System Performance

---

*Mike Thorne*

# Topics Covered

---

- ◆ **Supply and Demand**
- ◆ **Frequency Control**
- ◆ **Transmission Constraints**

# Supply and Demand

---

- ◆ **Since the last forum:**
  - ◆ **System Margin**
    - System continues to be generally long
  - ◆ **NGC System Warnings**
    - None issued
  - ◆ **Emergency actions**
    - None required

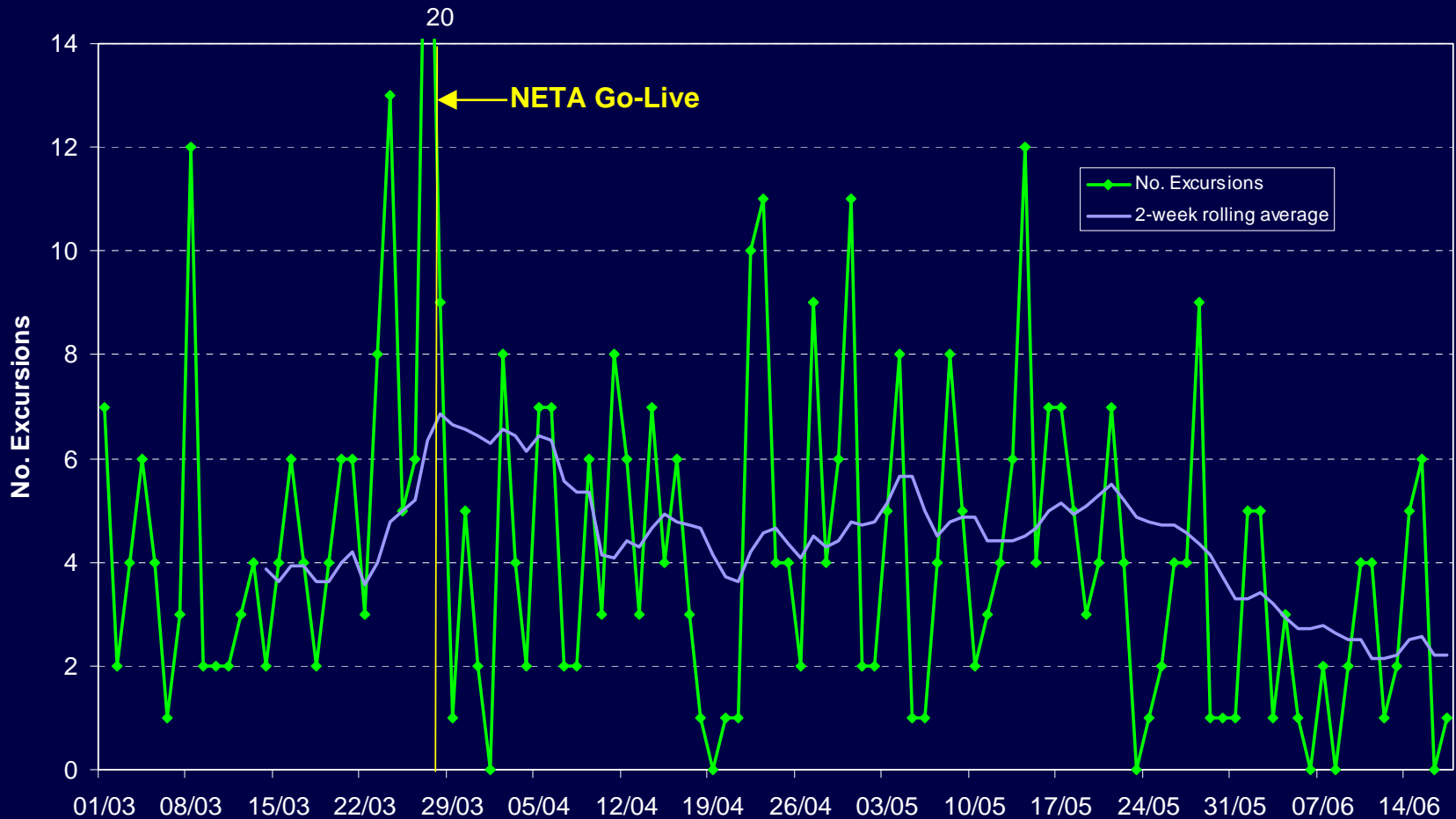
# Frequency Performance

---

- ◆ **Primary measure of how well the system is in balance**
- ◆ **Since the last forum:**
  - ◆ **Statutory Limits ( $\pm 0.5\text{Hz}$ )**
    - No excursions
  - ◆ **Operational Limits ( $\pm 0.2\text{Hz}$ )**
    - Number of excursions gradually reducing
    - Extent of excursions unchanged

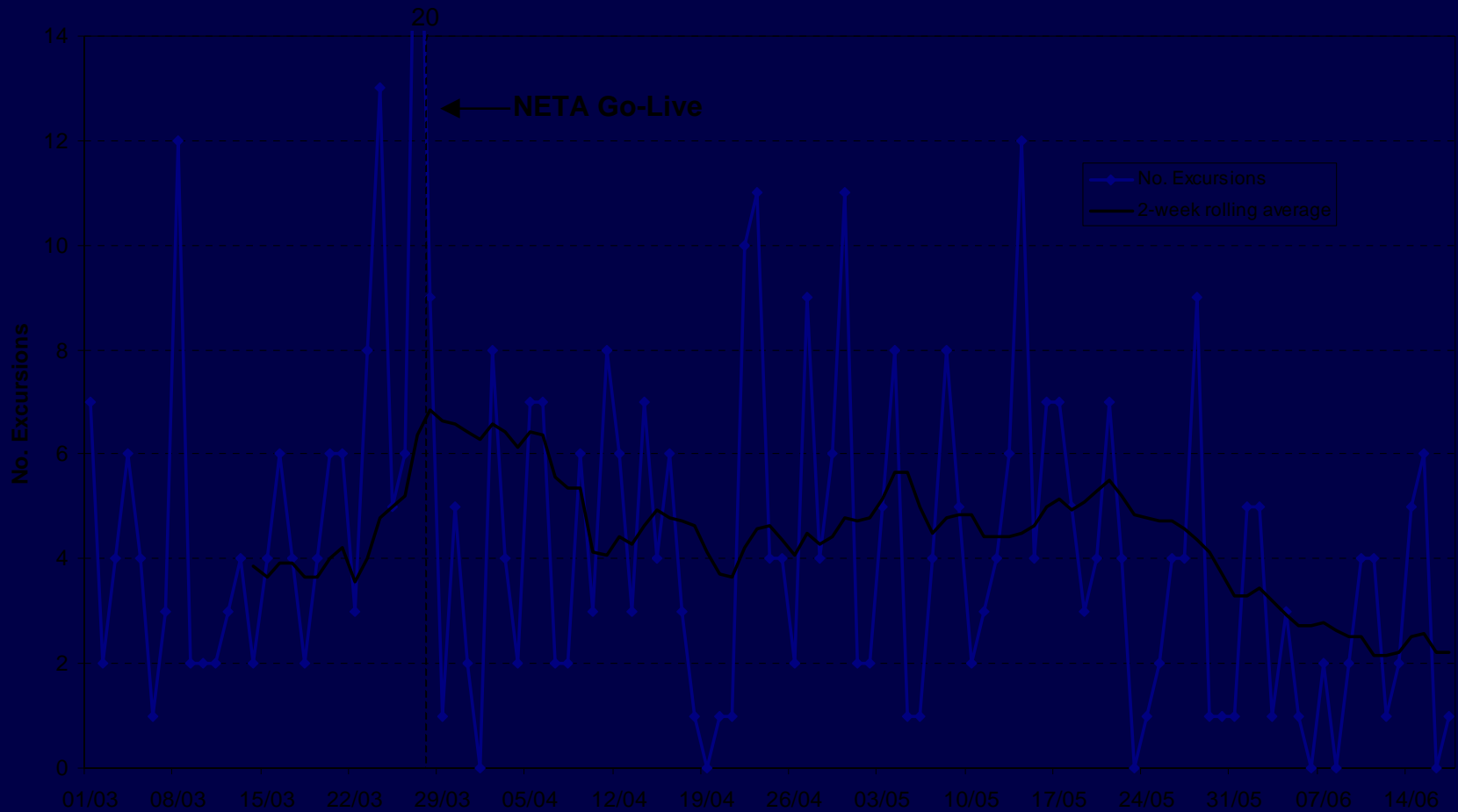
# Frequency Performance

## Excursions Outside Operational Limits ( $\pm 0.2\text{Hz}$ )



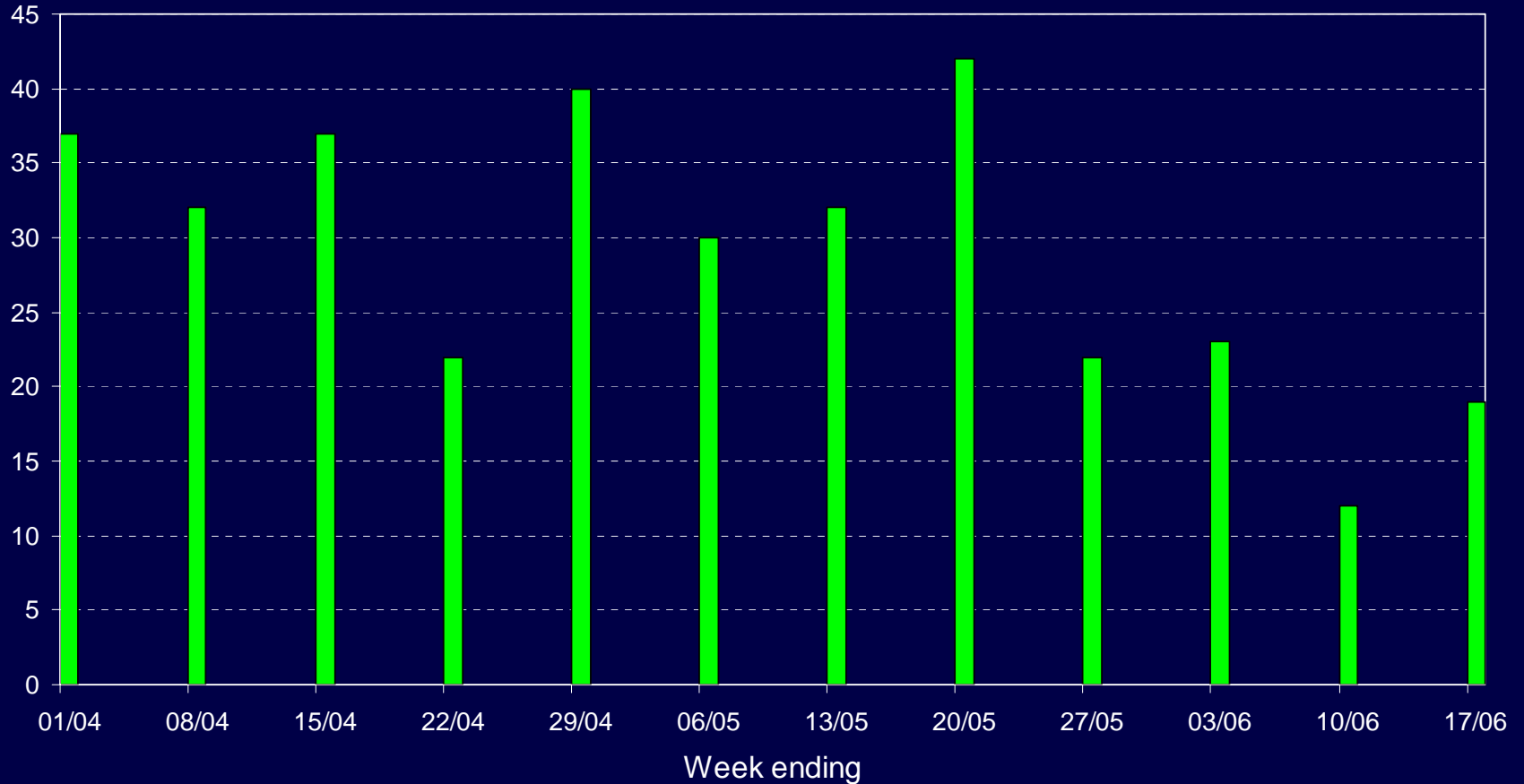
# Frequency Performance

## Excursions Outside Operational Limits ( $\pm 0.2\text{Hz}$ )



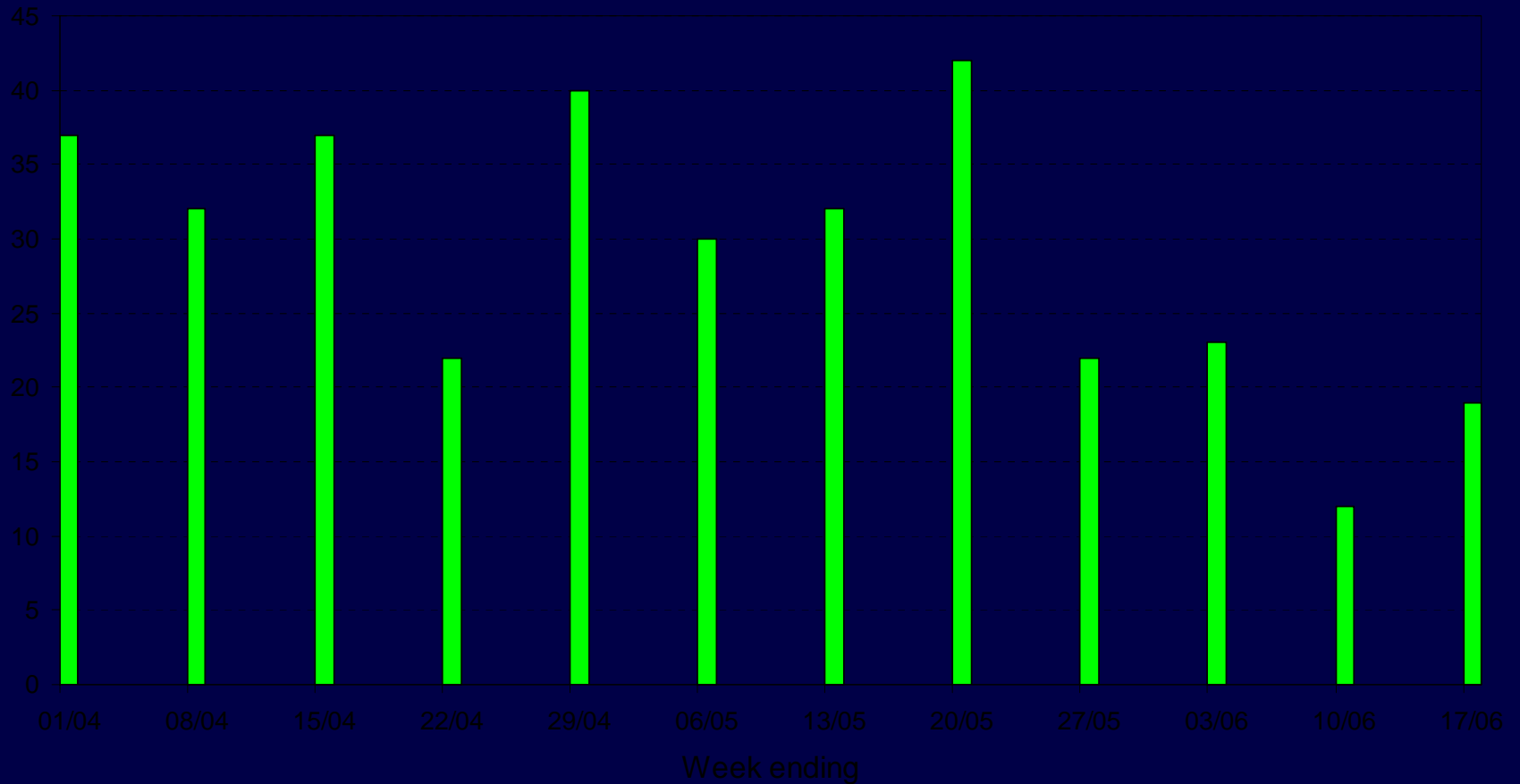
# Frequency Performance

## No. Excursions by Week



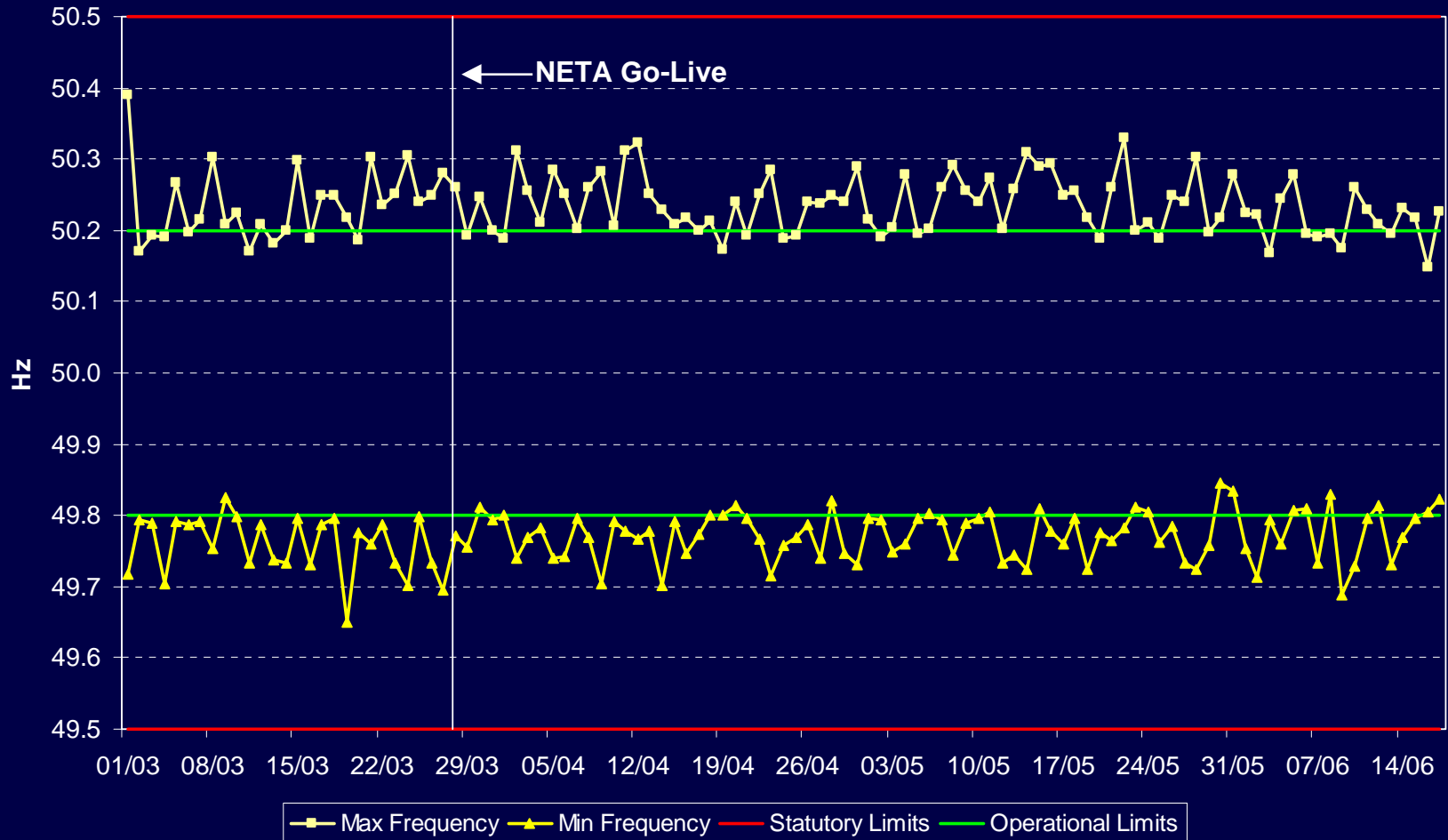
# Frequency Performance

No. Excursions by Week



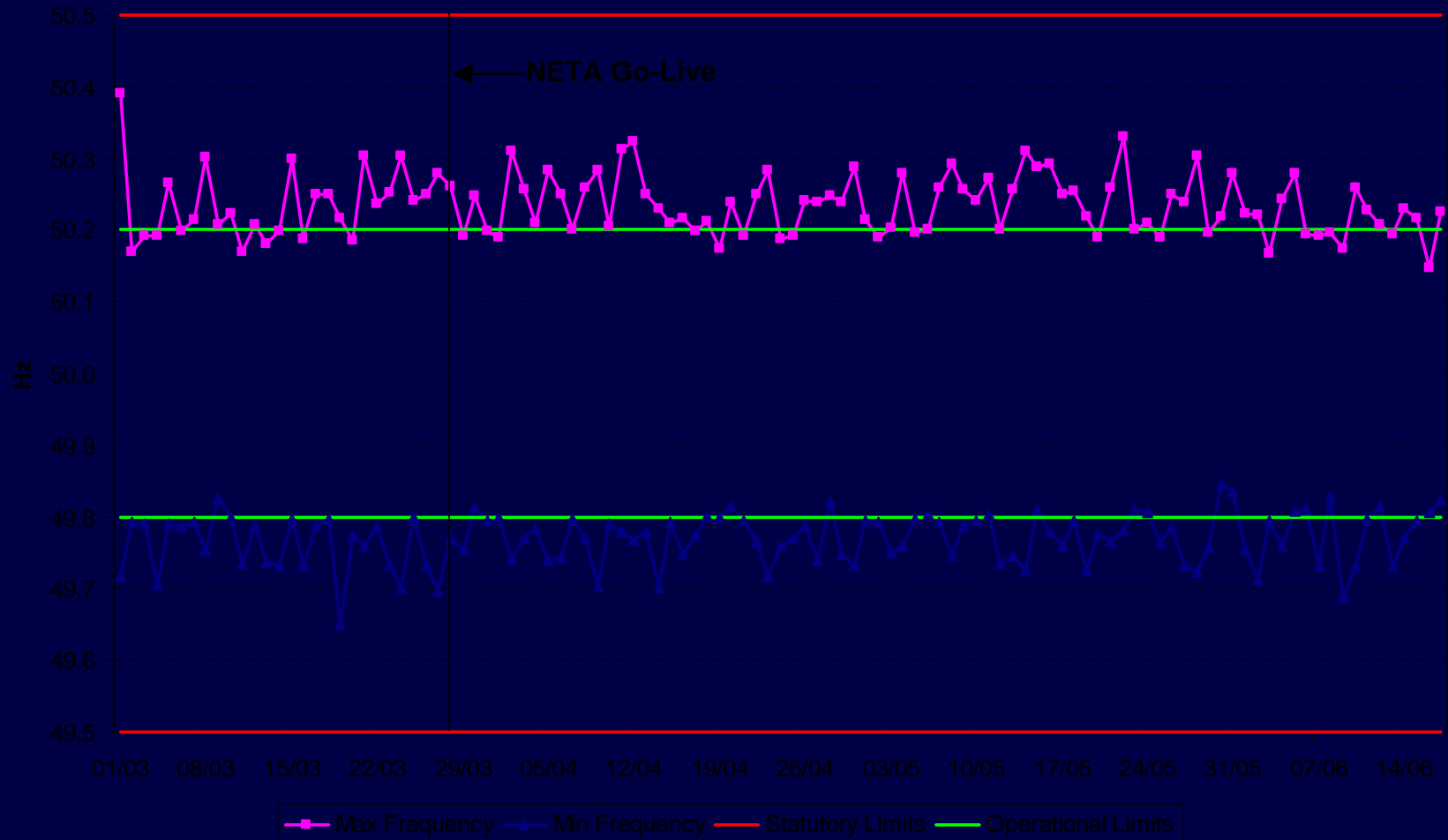
# Frequency Performance

## Daily Frequency Extremes



# Frequency Performance

## Daily Frequency Extremes



# Transmission Constraints

---

- ◆ **Identify potential system congestion**
  - ◆ **Pre- or post-fault actions**
  - ◆ **Numbers of boundaries investigated**
    - **No change since NETA**
- ◆ **Limited experience of active constraints under NETA**
  - ◆ **Example:**
    - **Biggin Hill air crash adjacent to 400kV line**

# Summary

---

- ◆ **System has remained secure**
- ◆ **Gradual reduction in number of excursions outside operational limits whilst reducing BM costs**
- ◆ **Limited experience of managing active transmission constraints under NETA**