



# Monthly Monitoring Report on Over-riding Constraints for December 2021 Billing Month

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**26 November to 25 December 2021**

**August 2022**

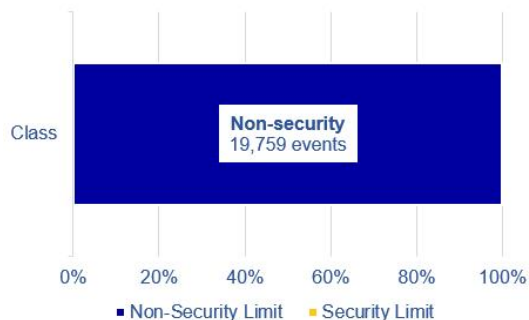
This Report is prepared by the  
Philippine Electricity Market Corporation –  
Market Assessment Group for the  
Market Surveillance Committee

## OVER-RIDING CONSTRAINTS MONITORING

### BY CATEGORY AND REGION

**19,759 events**

All of the events were categorized as non-security limit



**91%**

**17,943 events involving Luzon plants**

**9%**

**1,816 events involving Visayas plants**

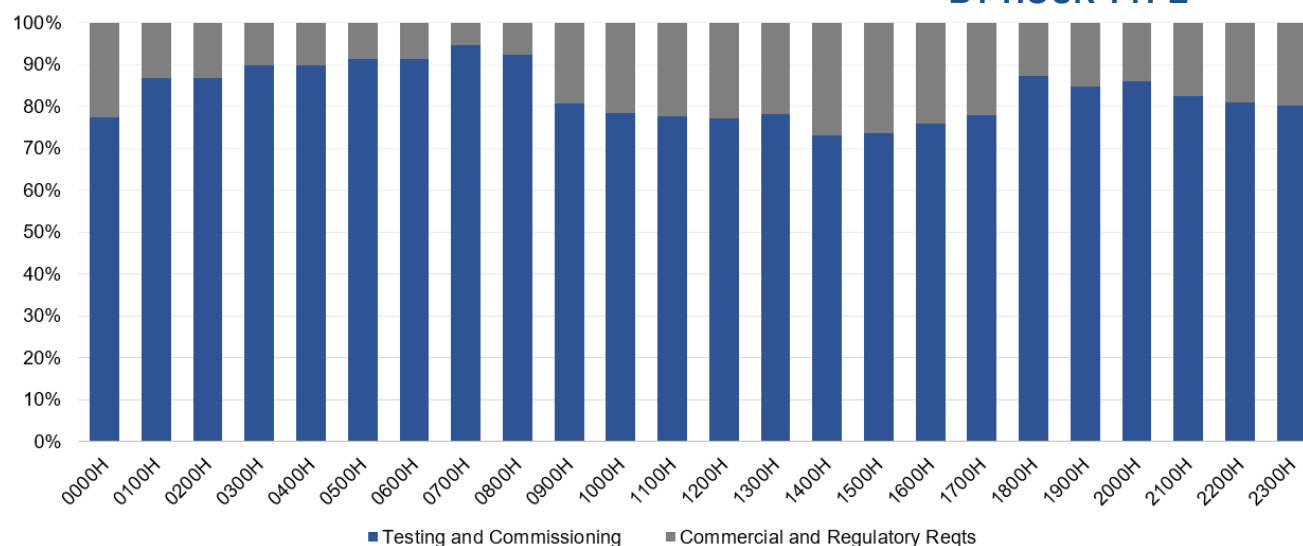
- The December 2021 billing month recorded over-riding decreasing trend of impositions involving **23 Luzon** and **4 Visayas generators**. The **47.67% significant decrease** from the previous month was a result of **market suspension** impositions from 16 December 2021 to 10 February 2022<sup>1</sup>. **security limit** mainly related to **the conduct of testing and commissioning (T&C)**.

**Note:** Under the Dispatch Protocol Manual Issue 16.0, imposition of over-riding constraints falls into 2 categories – 1) security limit i.e., MRU and other types as may be recommended by SO and 2) non-security limit. Security limit is imposed to address possible threats in system security while non-security limit is related to 1) generating unit limitations, 2) commercial and regulatory tests, and lastly, 3) conduct of testing and commissioning of plants.

The monitoring of the over-riding constraints is based on the data and information provided by MO (i.e., real time market results and MMS-input files on security limits) and SO (i.e., SO Data for Market Monitoring).

<sup>1</sup> Market suspension was lifted on 17 January 2022 for Visayas excluding Bohol, while Bohol continued to be on market suspension until 10 February 2022

### BY HOUR TYPE



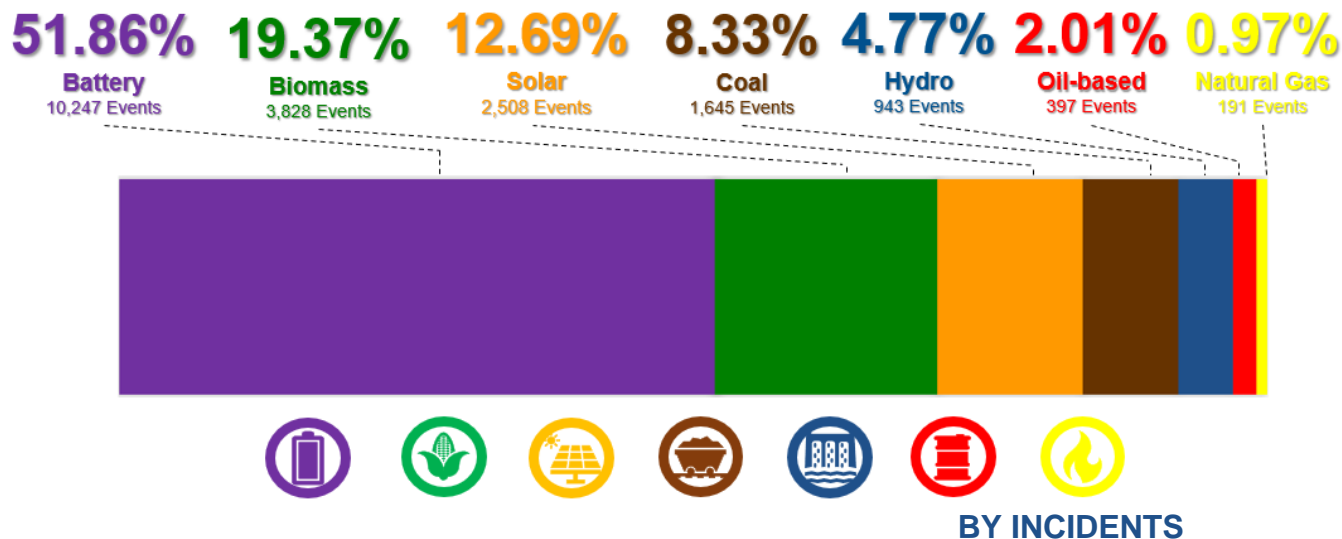
Most of the occurrences of over-riding constraints imposition over a 24-hour cycle was due to the **conduct of plants' T&C** all throughout the period ranging from for **70 to 95 percent of the time** which are accounted to the conduct of T&C of **Battery Energy Storage System (BESS)** plants.

The impositions observed during the **whole 24-hour period** varied between **T&C** (for battery, biomass, and solar), and **Commercial & Regulatory Requirements** (for hydro, oil-based, and coal) with **less T&C impositions occurring during off-peak hours** accounting to 71 to 77 percent of the total over-riding impositions

The increase in T&C impositions during peak hours was due to the **start of a new Solar plant's T&C period**. In addition, during the December billing month, there was a decrease in the conduct of various tests for commercial and regulatory requirements.

## OVER-RIDING CONSTRAINTS MONITORING

### BY PLANT TYPE



- For this billing month, **more than half** of the over-riding constraints imposition were **attributable to BESS** for the **conduct of T&C of 4 BESS plants** with one of them starting its T&C period within the month of December 2021.
- A **decrease** in over-riding constraints imposition was noted for **Coal** and **Biomass** plants which was a result of the **start of commercial operation** of 1 Coal and 1 Biomass plants. Another Biomass plant had a decrease in over-riding impositions due to the **expiration of its T&C period**.
- Increase in the imposition for Solar plant was a result of the recent start of conduct of **T&C of a new Solar plant**.

### NON-SECURITY LIMITS



- Majority of the non-security limit events recorded for the December billing month were due to the conduct of **T&C** involving **7 plants** which started their testing in 2021.

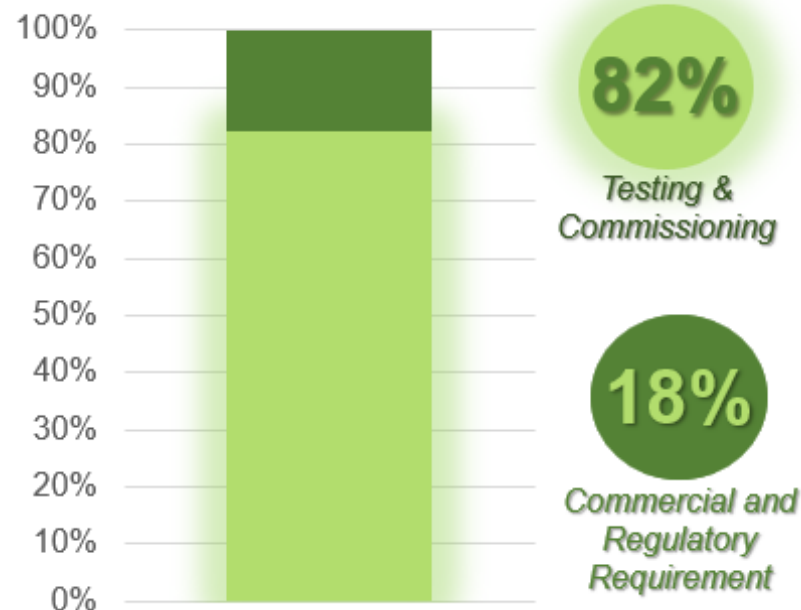


- Incidents related to **Commercial and Regulatory Requirements** were attributable to the conduct of various tests such as Emission test, Ancillary test, Capability test, Capacity test, Performance test, Grid Compliance test, Charging/Discharging test, and Net Contracted Capacity (NCC) test.



- No over-riding constraints events related to Generating Unit limitation was noted during the billing month.

**Note:** No security limit event noted during the covered period. The last imposition was in January 2020 on Malaya TPP as a designated MRU during the supply shortfall.



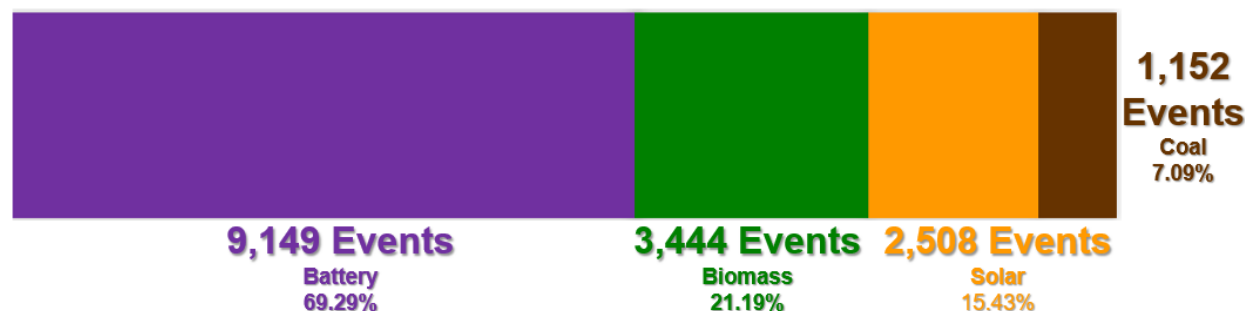
## OVER-RIDING CONSTRAINTS MONITORING

### PLANTS ON COMMISSIONING TEST

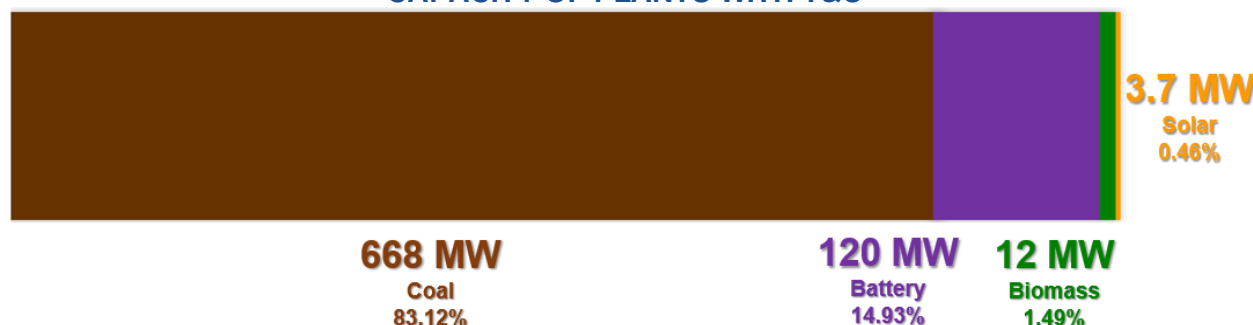
#### SUMMARY OF PLANTS UNDER T&C

Plant Name	Node ID	Registered Capacity	Start Date of Over-Riding Events	Start of T&C (per DOE DC2021-06-0013)	No. of Over-Riding Events
Lamiao Battery Energy Storage System (BESS)	01LAMA_O_BAT	20	December 11, 2021	July 17, 2021	1,439
Limay Battery Energy Storage System (BESS)	01LIMAY_BAT	40	August 26, 2021	August 01, 2021	5,183
Ubay Battery Energy Storage System (BESS)	07UBAY_BAT	40	October 19, 2021	August 18, 2021	2,193
Alaminos Battery Energy Storage System	03ALMNOS_BAT	20	November 24, 2021	October 29, 2021	334
<b>Sub-Total (Battery)</b>		<b>120</b>			<b>9,149</b>
HyperGreen Energy Biomass	01HYPGRN_G01	12	August 26, 2021	July 24, 2021	3,444
<b>Sub-Total (Biomass)</b>		<b>12</b>			<b>3,444</b>
GNPower Dinginin Coal Plant - Unit 1	01GNPD_U01	668	February 06, 2021	July 17, 2021	1,152
<b>Sub-Total (Coal)</b>		<b>668</b>			<b>1,152</b>
Bataan Solar Power Plant	01BTSOLE_N_G01	3.7	November 27, 2021	October 29, 2021	2,508
<b>Sub-Total (Solar)</b>		<b>3.7</b>			<b>2,508</b>
<b>Grand Total</b>		<b>803.7</b>			<b>16,253</b>

#### NUMBER OF EVENTS WITH T&C



#### CAPACITY OF PLANTS WITH T&C



The December 2021 billing month showed a **decrease in impositions under T&C** compared to the previous month as most of the plants under prolonged T&C have already **started commercial operations**, while plants with **expired T&C periods** no longer received over-riding impositions.

For the covered billing month, most of the plant on T&C were attributable to BESS, followed by Biomass and Solar.

Based on the updates provided by the Independent Electricity Market Operator of the Philippines (IEMOP), the following were some of the updates on the status of power plants under extended T&C during the December billing month:

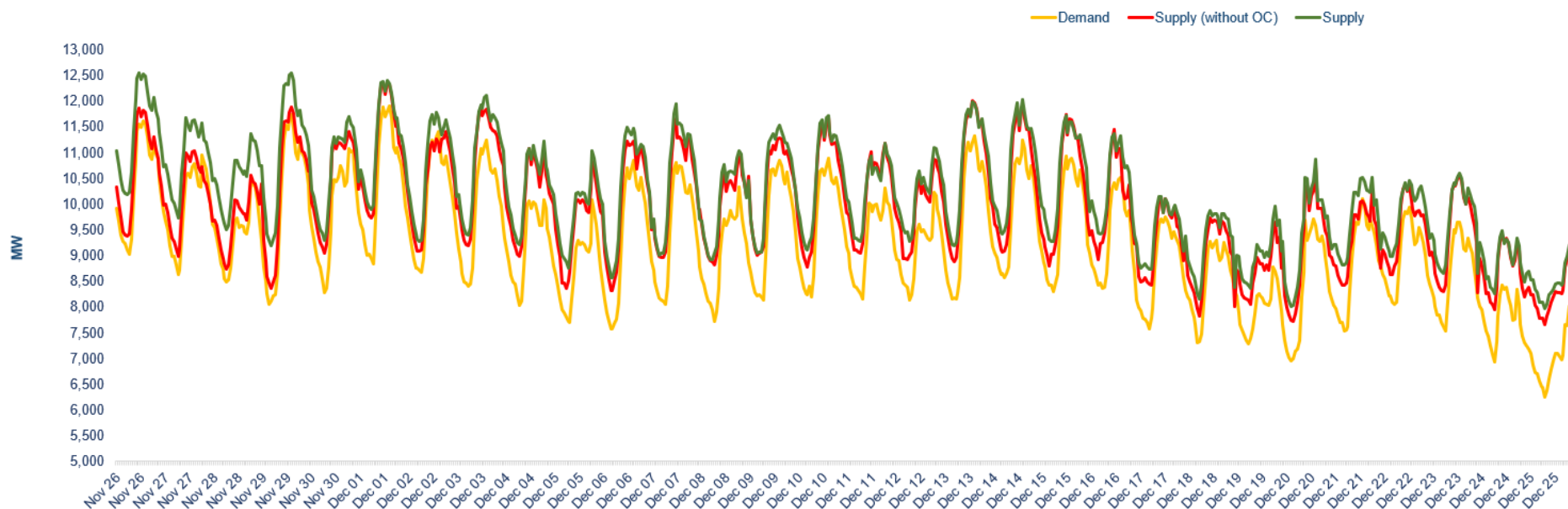
- **6 plants** were given an extension on their its Provisional Certificate of Approval to Connect (PCATC) to conduct T&C
- **1 plant** just started conducting its T&C period

*Note: The Department of Energy (DOE) department circular no. DC2021-06-0013 (Adopting a General Framework Governing the Test and Commissioning of Generation Facilities for Ensuring Readiness to Deliver Energy to the Grid or Distribution Network) provides a transitory provision that:*

- *Allows generation companies that are already on T&C, upon effectivity of the circular (especially those plants on prolonged commissioning test), to continue to conduct commissioning test for a maximum of two (2) months after the effectivity date.*

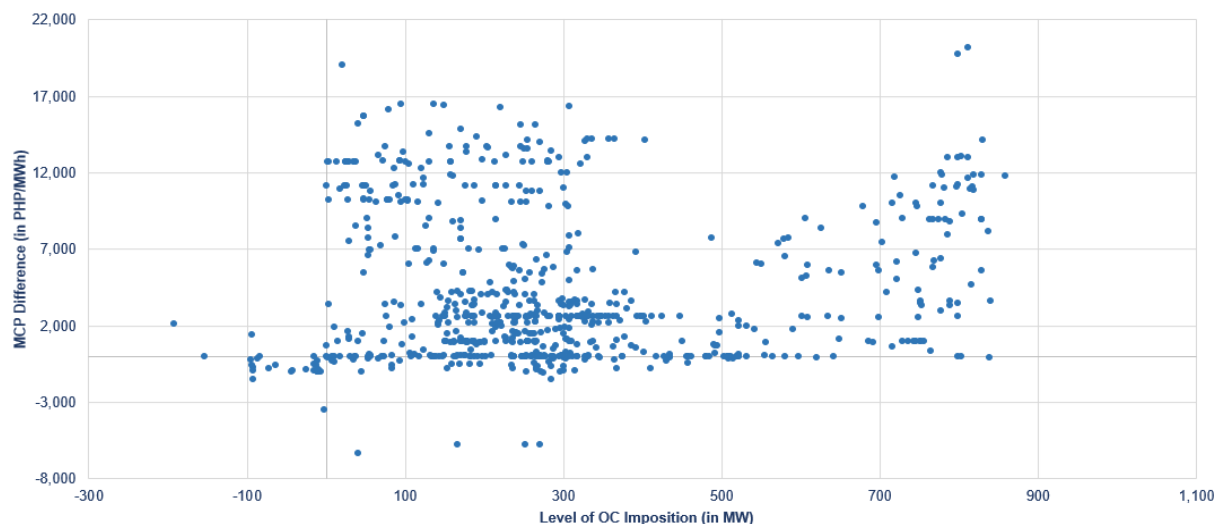
*This will be in consideration in the MSC's monitoring of plants on prolonged testing commissioning test (beyond the maximum two-month period allowed also under the ERC Resolution No. 16, Series of 2014).*

## MARKET IMPACT ON SUPPLY

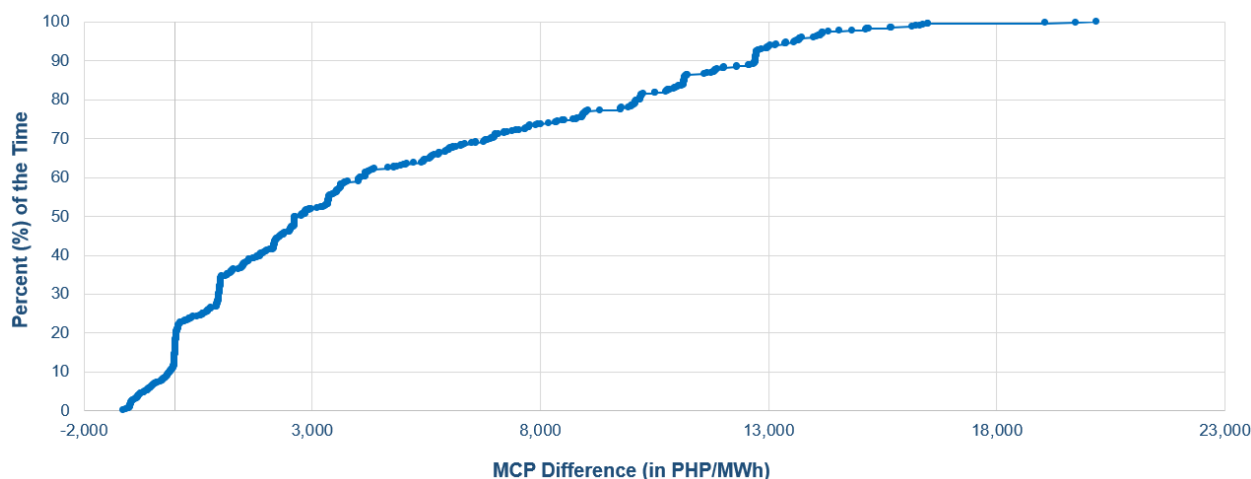


- In December 2021, demand ranged from 6,259 MW to 11,905 MW, with a minimum and maximum supply of 8,490 MW and 12,554 MW, respectively. Without the OC, supply falls to a minimum of 7,838 MW and a maximum of 12,366 MW, resulting in a 9.09% reduction in supply and a 24.85% increase in price.
- Similar to the previous month's trend, OC impositions contributed to the increase in the supply by up to 858 MW in December 2021, with an average increase of 258 MW during peak hours and 315 MW during off-peak hours.
- The added capacity provided by the OC impositions aided in the increase of supply. However, it may be observed that the reduction in actual cost of generation may have distorted market pricing, risking the market's ability to sustain itself in the long run.

## MARKET IMPACT ON MARKET CLEARING PRICE



- The additional MW generated by over-riding constraint impositions generally resulted to a decrease in market price. This decrease reached up to a monthly maximum of PhP 20,204/MWh.
- The additional MW supply generated by the OC impositions resulted in a PhP 4,340/MWh drop in MCP.



- When examining the impact of OC on the market price in terms of its percentage distribution, it was discovered that, 50% of the time, the MCP difference when OC is imposed is less than PHP 3,000/MWh.
- Prices have risen by a maximum of PhP 1,136/MWh and an average of PhP 451/MWh less than 15% of the time