

# GHG TRACKING & REPORTING

MSC



*Working together to responsibly and economically  
keep the lights on today and in the future.*



SouthwestPowerPool



SPPorg



southwest-power-pool



Southwest Power Pool  
**WESTERN  
ENERGY  
SERVICES**

# PRESENTATION OBJECTIVE



The goal is to, as transparently as possible, report the energy and emissions across the Markets+ Footprint



This presentation analyzes the make-up of the SPP data and provides differing avenues of reporting the data for state utilization

# TERMINOLOGY REVIEW:

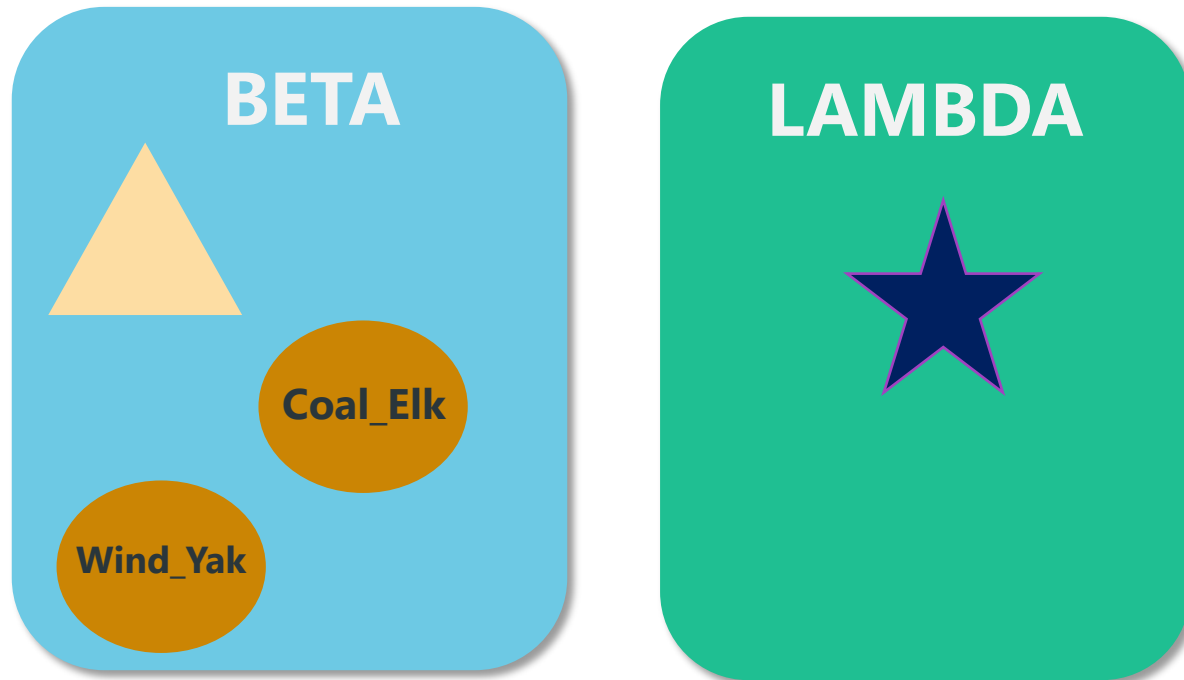
**Non-Reporting Entities:** *Market Participants that have not requested tracking and reporting of GHG emissions*

**Resource Portfolio:** *The collection of resources owned by, or contracted to, a Load-Responsible Entity (LRE).*

**Residual Market Mix:** *The Energy not allocated to a particular LRE, or Energy that exceeds the LRE's load within M+ in each hourly interval*

# **SAMPLE CASE 1**

# SAMPLE DATA – SETUP



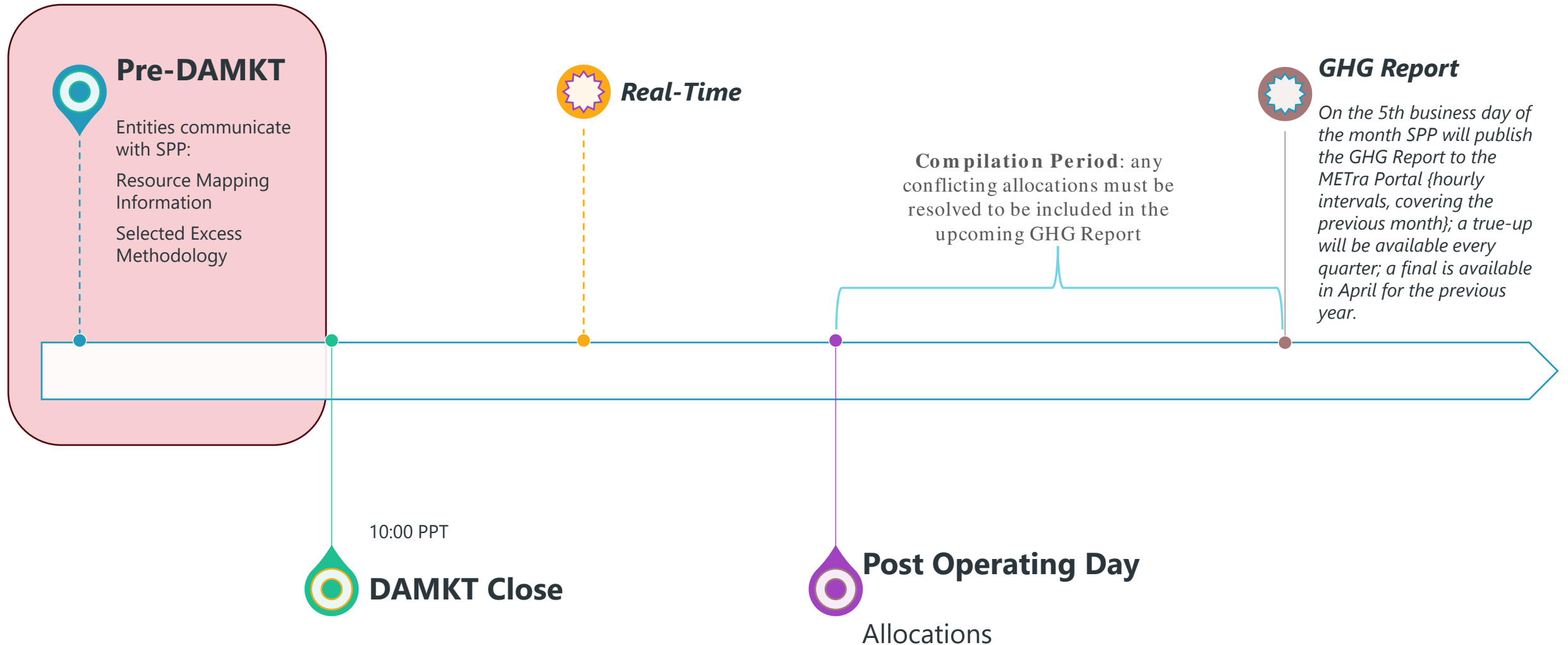
- Both entities are within the M+ Footprint
- Both entities depicted elect to participate in GHG Tracking and Reporting
- BETA
  - Has both gen and load
- LAMBDA
  - Power Marketer



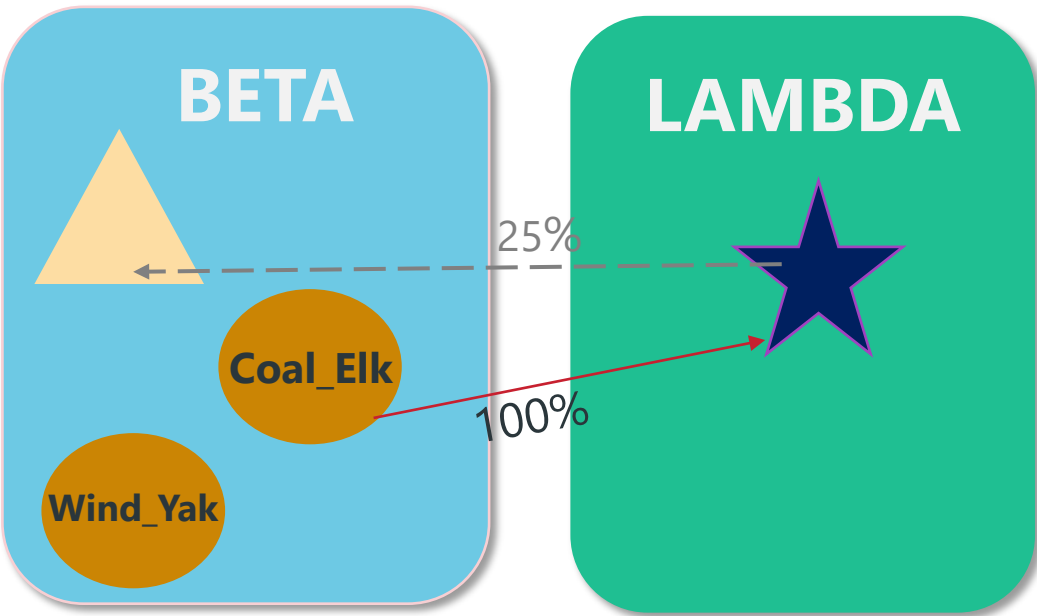
# PROTOCOL LANGUAGE 'GHG RESOURCE MAPPING AND ALLOCATION' SECTION

- With respect to contracted-for Resources, the Market Participant must provide confirmation from the relevant counterparty or counterparties in order for the Allocation(s), or change in Allocation(s), to be reflected in the GHG Report.
- With respect to contracted-for Resources, the Market Operator will reflect the identified relocation counterparty in the applicable GHG Report.

# M+ GHG TRACKING AND REPORTING TIMELINE



# SAMPLE DATA – METRA CLAIMS PRIOR TO DISPATCH



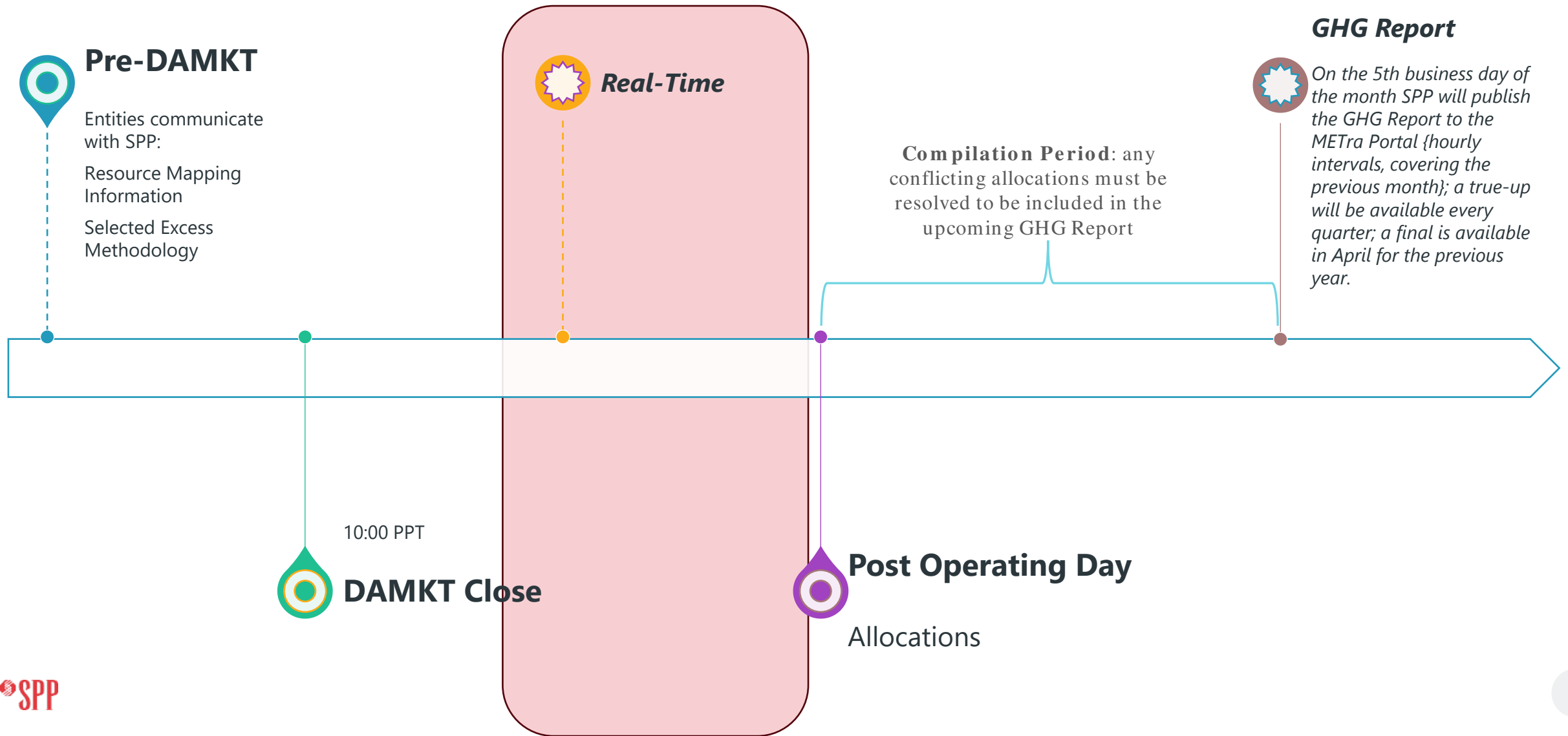
BETA	Owned	Contracted
	Wind_Yak	N/A
	Coal_Elk	100% output to Lambda

LAMBDA	Owned	Contracted
	N/A	100% output of Coal_Elk

← — — 25% of Coal\_Elk is contracted back to BETA load at the Market Rate. This contract is a general contract therefore not reflected in the METra Portal.

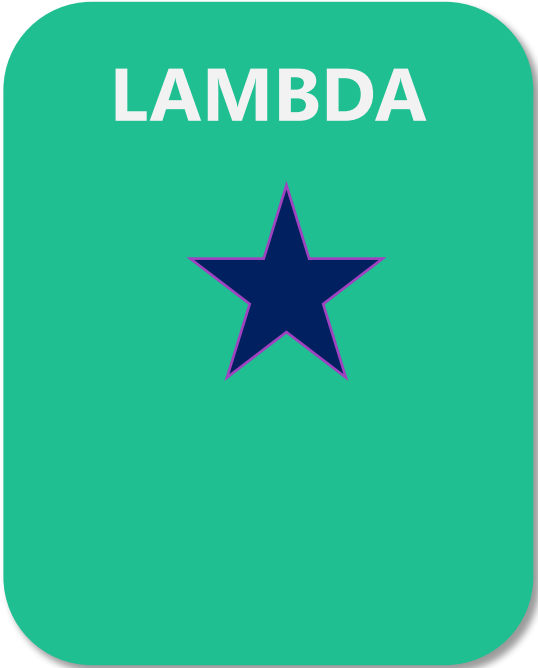
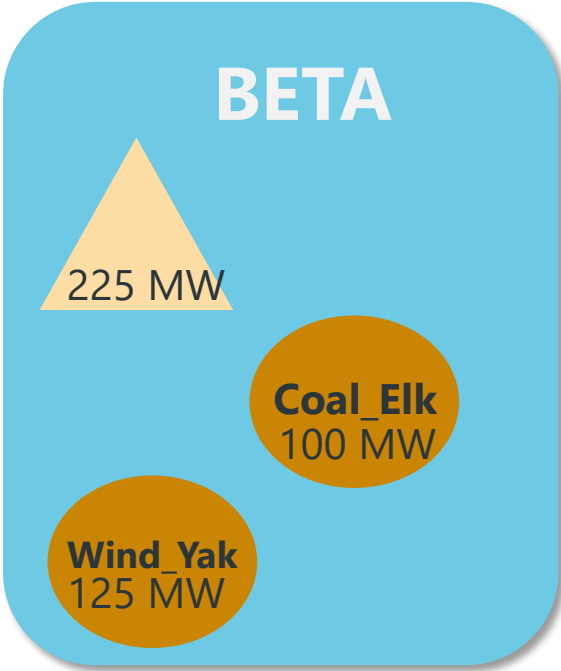


# M+ GHG TRACKING AND REPORTING TIMELINE



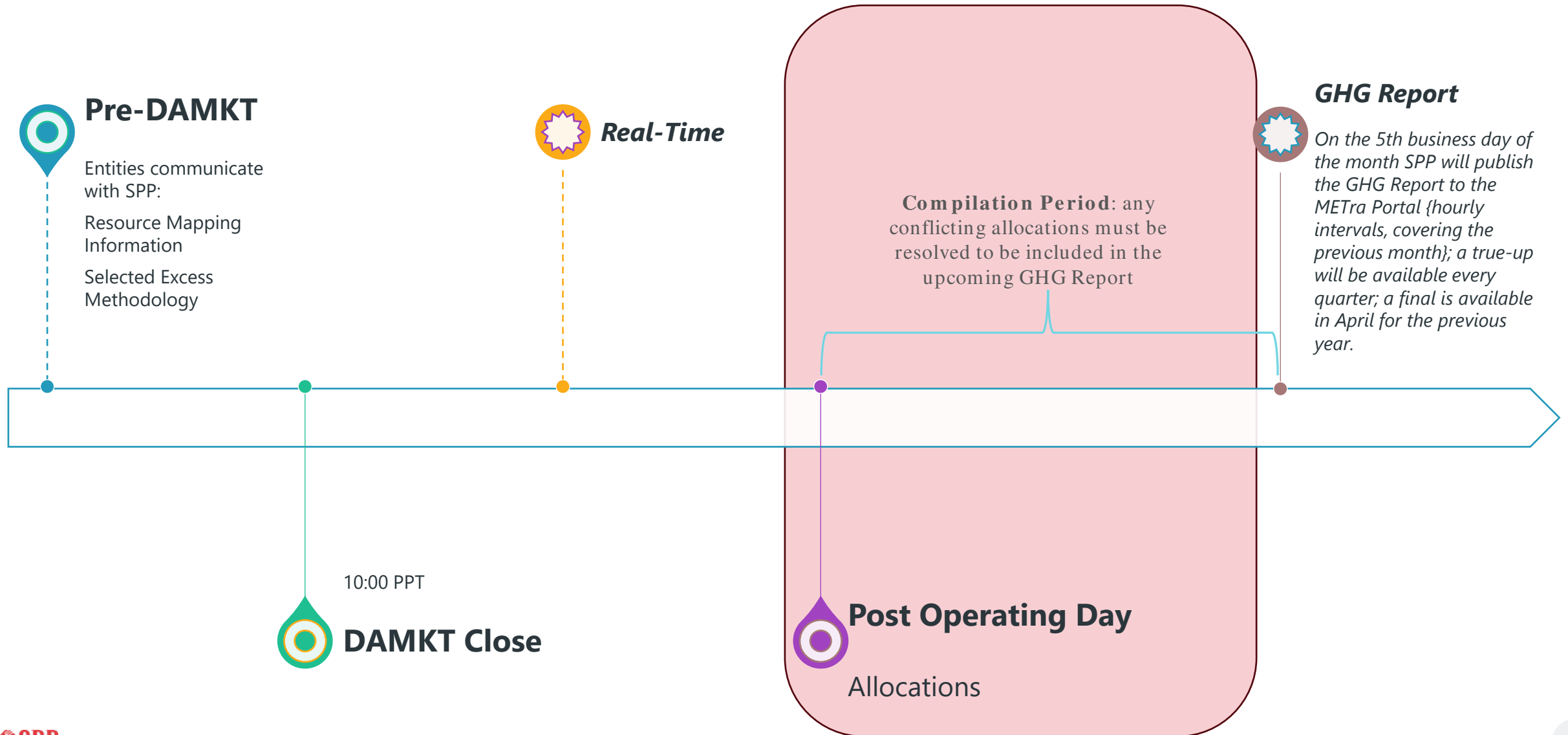
# SAMPLE DATA – MARKET DISPATCH ILLUSTRATION – 01:00

Entity	Load (MW)
Beta	225
Lambda	N/A
TOTAL SYSTEM	225 MW



Entity	Production (MW)
Beta	225
Lambda	N/A
TOTAL SYSTEM	225 MW

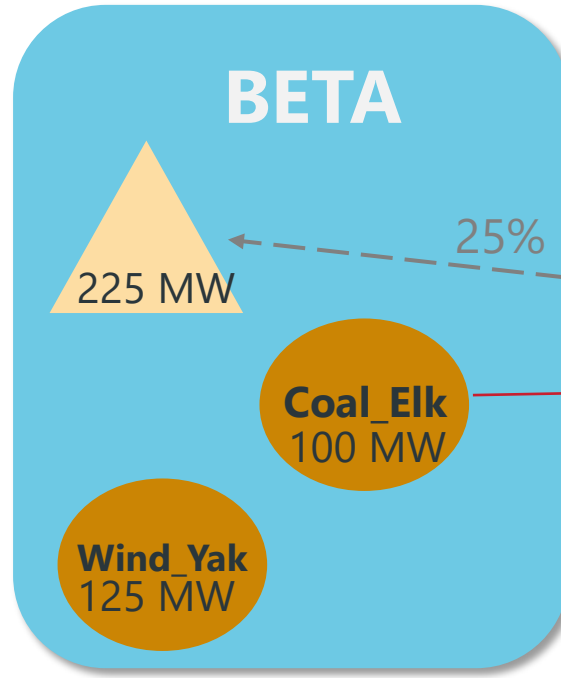
# M+ GHG TRACKING AND REPORTING TIMELINE



# SAMPLE DATA– GHG TRACKING AND REPORTING (OVERLAY OF CLAIMS)

## Beta

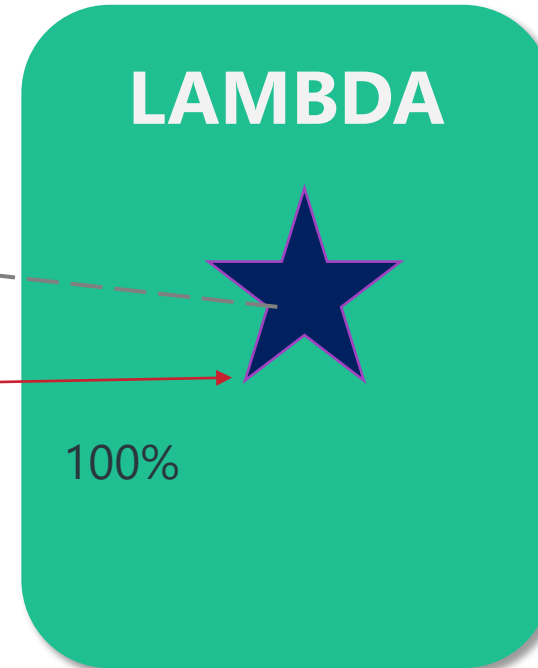
0 MW Coal\_Elk  
125 MW Wind\_Yak  
Allocated Total:  
125 MW  
Total Load:  
225 MW  
Residual Energy:  
-100 MW



## LAMBDA

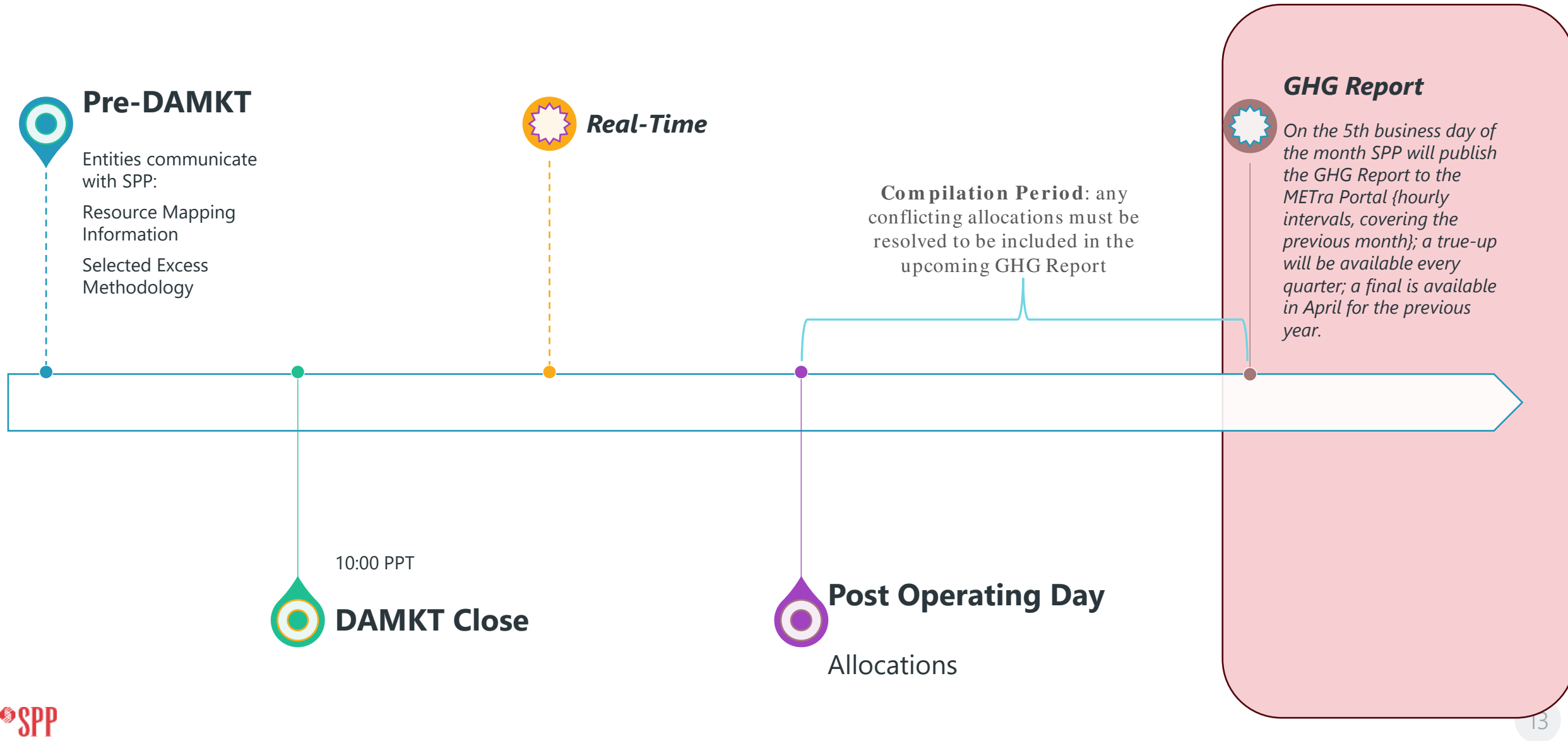
## Lambda

100 MW Coal\_Elk  
Allocated Total:  
100 MW  
Total Load:  
0 MW  
Residual Energy:  
+100 MW



← — — 25% of Coal\_Elk is contracted back to BETA load at the Market Rate. This contract is unspecified therefore not reflected in the METra Portal.

# M+ GHG TRACKING AND REPORTING TIMELINE

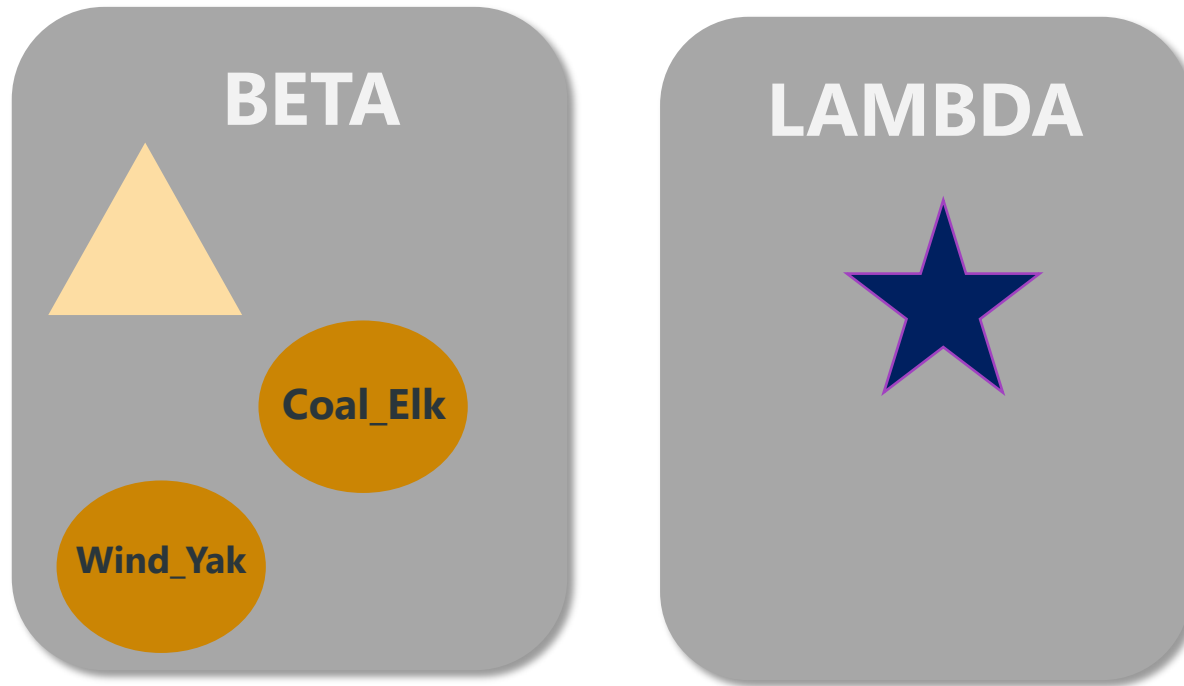


Sample Data				
All Entities participating in GHG Tracking and Reporting				
LIFE Beta	6/1/2024	1.00		
<b>Resource Data</b>				
Resource	Production MW	Emission Factor	Production	
Owned Coal_Elk	50	0.7		
Owned Wind_Yak	100	0		
<b>Load Data</b>				
Load	MW			
Beta_Ld	100			
<b>Residual Data</b>				
MW	Methodology	Residual Emissions		
-35	Avg	N/A		
LIFE Gamma	6/1/2024	1.00		
<b>Resource Data</b>				
Resource	Production MW	Emission Factor	Production	
Contracted Coal_Elk	N/A	0.7		
Contracted Wind_Yak	N/A	0		
Contracted Wind_Hare	N/A	0		
<b>Load Data</b>				
Load	MW			
Gamma_Ld	225			
<b>Residual Data</b>				
MW	Methodology	Residual Emissions		
-35	Avg	N/A		
LIFE Delta	6/1/2024	1.00		
<b>Resource Data</b>				
Resource	Production MW	Emission Factor	Production	
Owned Wind_Hare	125	0		

# Go to Spreadsheet Sample Case 1 Tab

# **SAMPLE CASE 2**

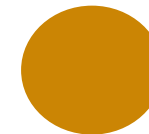
# SAMPLE DATA 2 – SETUP



- Both entities are within the M+ Footprint
- Both entities are Non-Reporting Entities
- BETA
  - Has both gen and load
- LAMBDA
  - Power Marketer



=load



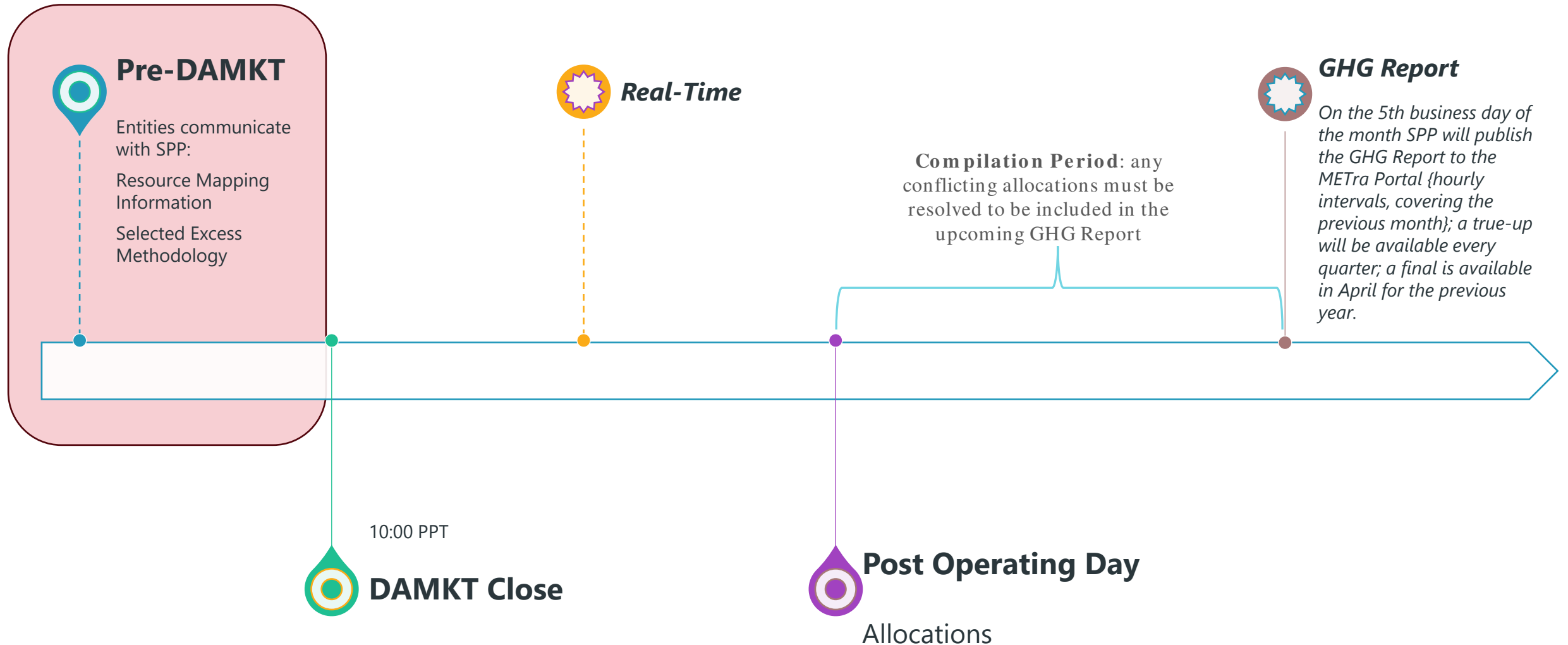
=generation



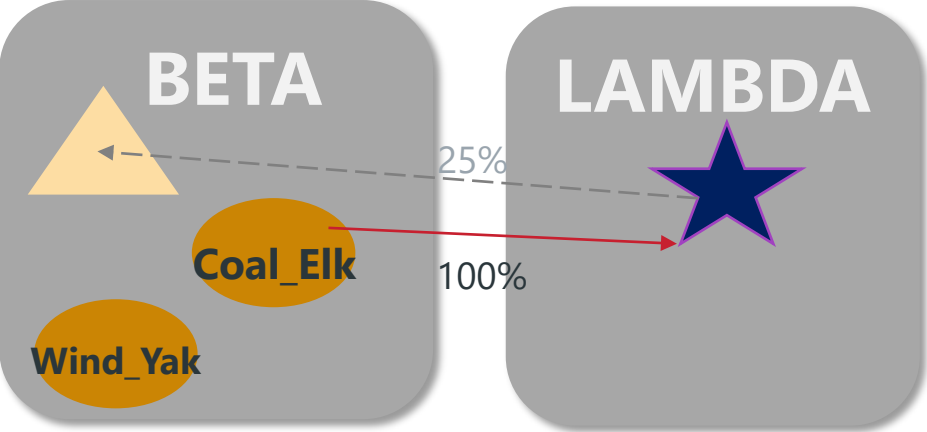
# PROTOCOL LANGUAGE 'GHG RESOURCE MAPPING AND ALLOCATION' SECTION

- If a Market Participant has elected not to participate in the Markets+ GHG Tracking and Reporting program (a “**Non-Reporting Entity**”), the Market Operator will automatically map the Non-Reporting Entity’s owned Resource(s) to the applicable Load Responsible Entity.

# M+ GHG TRACKING AND REPORTING TIMELINE



# SAMPLE DATA – METRA CLAIMS PRIOR TO DISPATCH



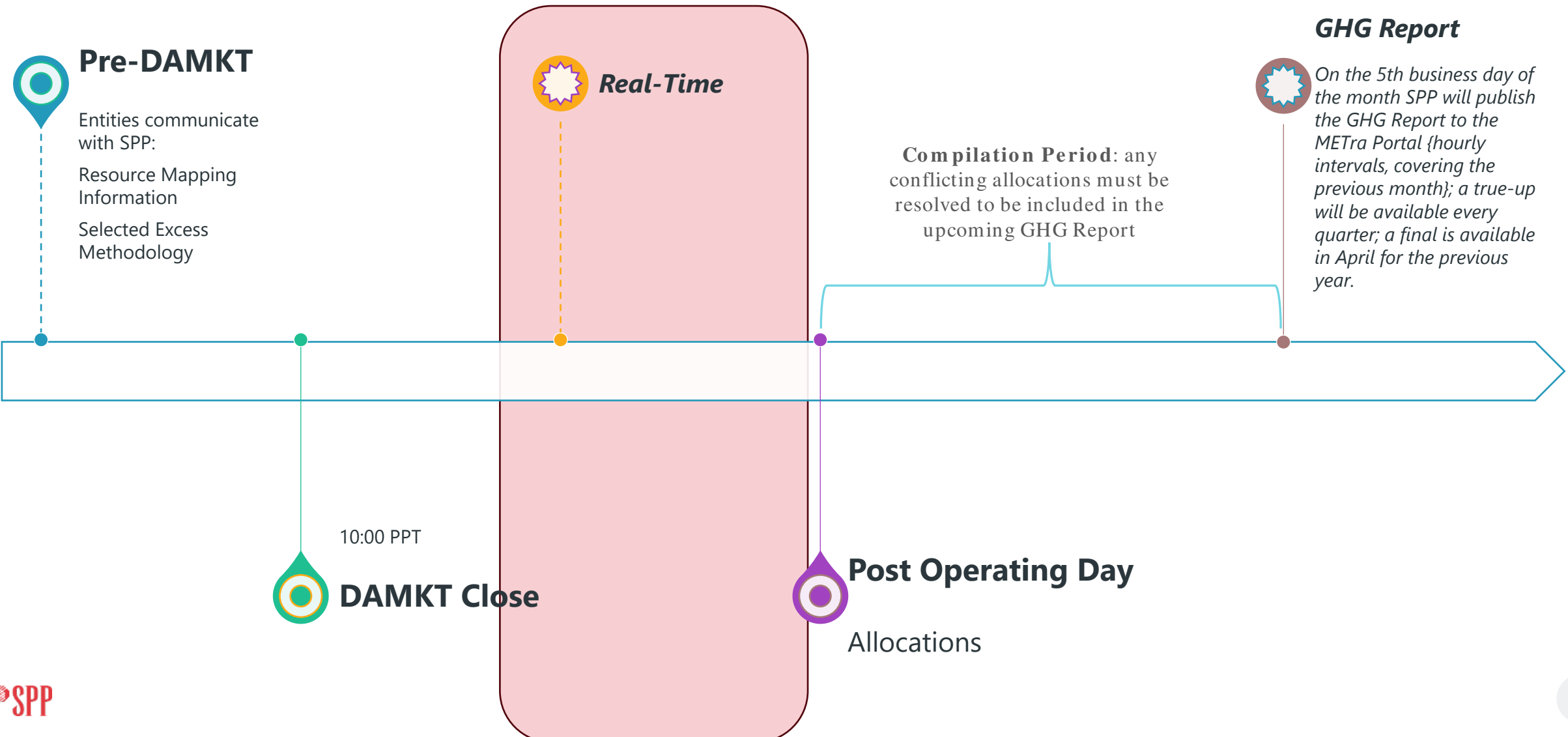
BETA	Owned	Contracted
	Wind_Yak	N/A
	Coal_Elk	<del>*100% output to Lambda</del>

LAMBDA	Owned	Contracted
	N/A	<del>*100% output of Coal_Elk</del>

←-----25% of Coal\_Elk is contracted back to BETA load at the Market Rate. This contract is a general contract therefore not reflected in the METra Portal.

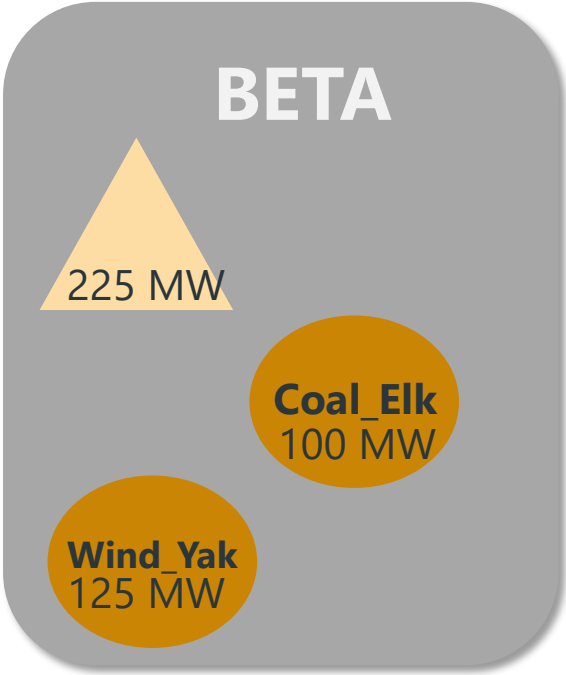
\*Each entity is Non-Reporting so 'owned resources' are automatically mapped to the source entity.

# M+ GHG TRACKING AND REPORTING TIMELINE



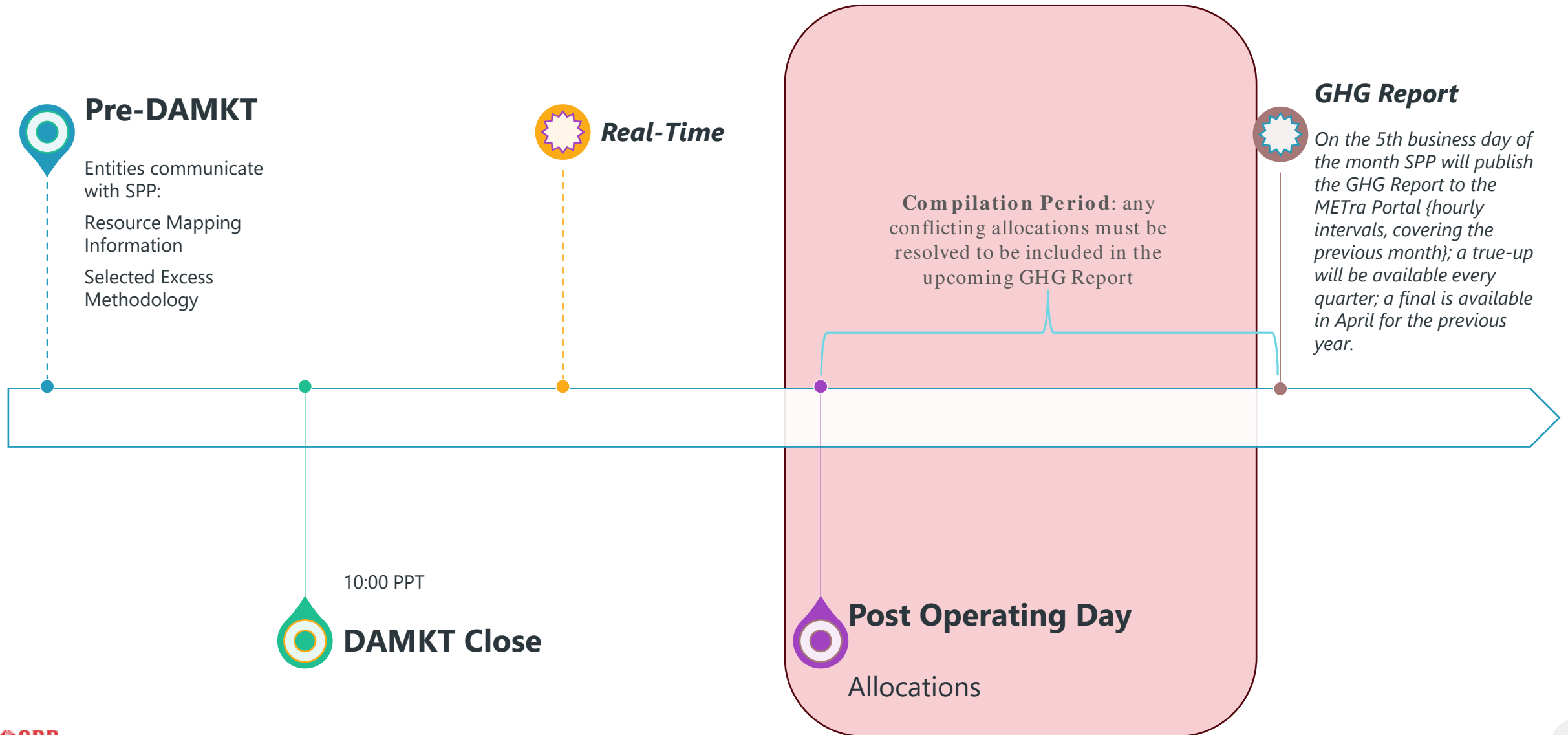
# SAMPLE DATA – MARKET DISPATCH ILLUSTRATION – 01:00

Entity	Load (MW)
Beta	225
Lambda	N/A
TOTAL SYSTEM	225 MW



Entity	Production (MW)
Beta	225
Lambda	0
TOTAL SYSTEM	225 MW

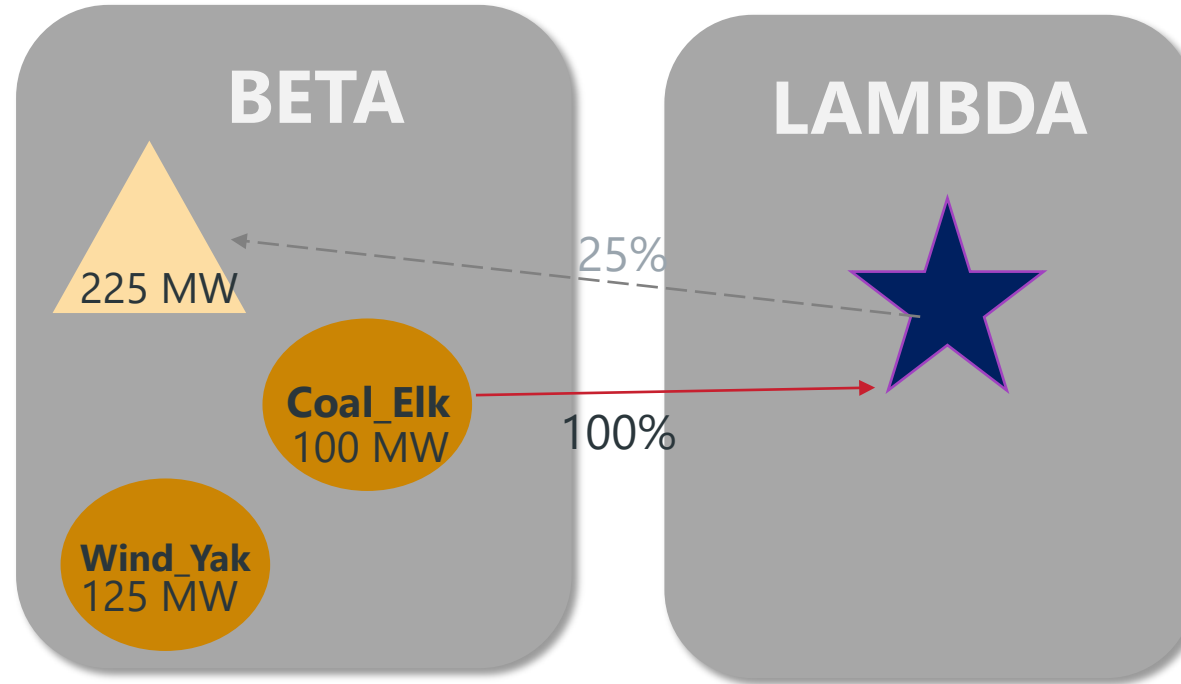
# M+ GHG TRACKING AND REPORTING TIMELINE



# SAMPLE DATA– GHG TRACKING AND REPORTING (OVERLAY OF CLAIMS)

## Beta

100 MW Coal\_Elk  
125 MW Wind\_Yak  
Allocated Total:  
225 MW  
Total Load:  
225 MW  
Residual Energy  
(load – gen):  
0 MW



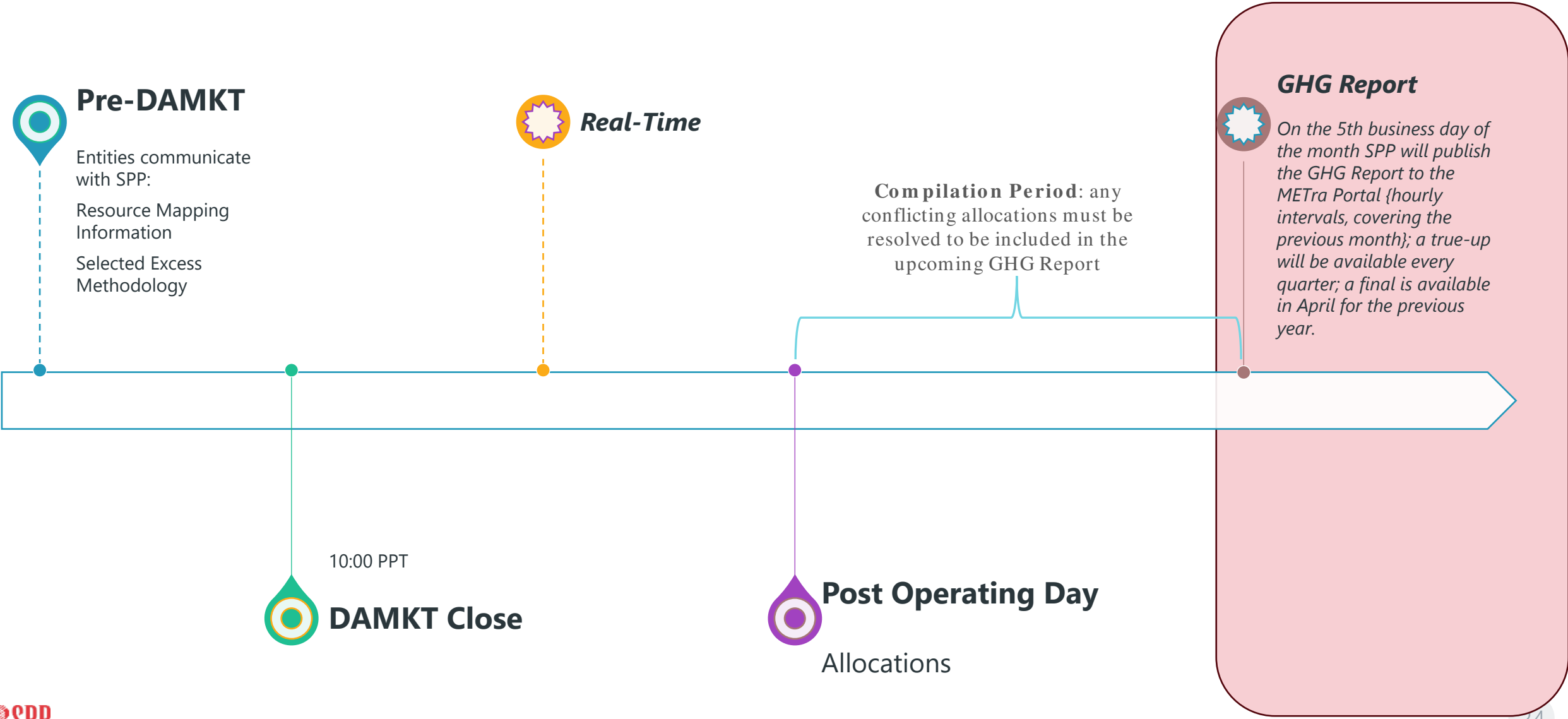
## Lambda

0 MW  
Allocated Total:  
0 MW  
Total Load:  
0 MW  
Residual Energy  
(load – gen):  
0 MW

←-----25% of Coal\_Elk is contracted back to BETA load at the Market Rate. This contract is a general contract therefore not reflected in the METra Portal.

\*Each entity is Non-Reporting so 'owned resources' are automatically mapped to the source entity.

# M+ GHG TRACKING AND REPORTING TIMELINE



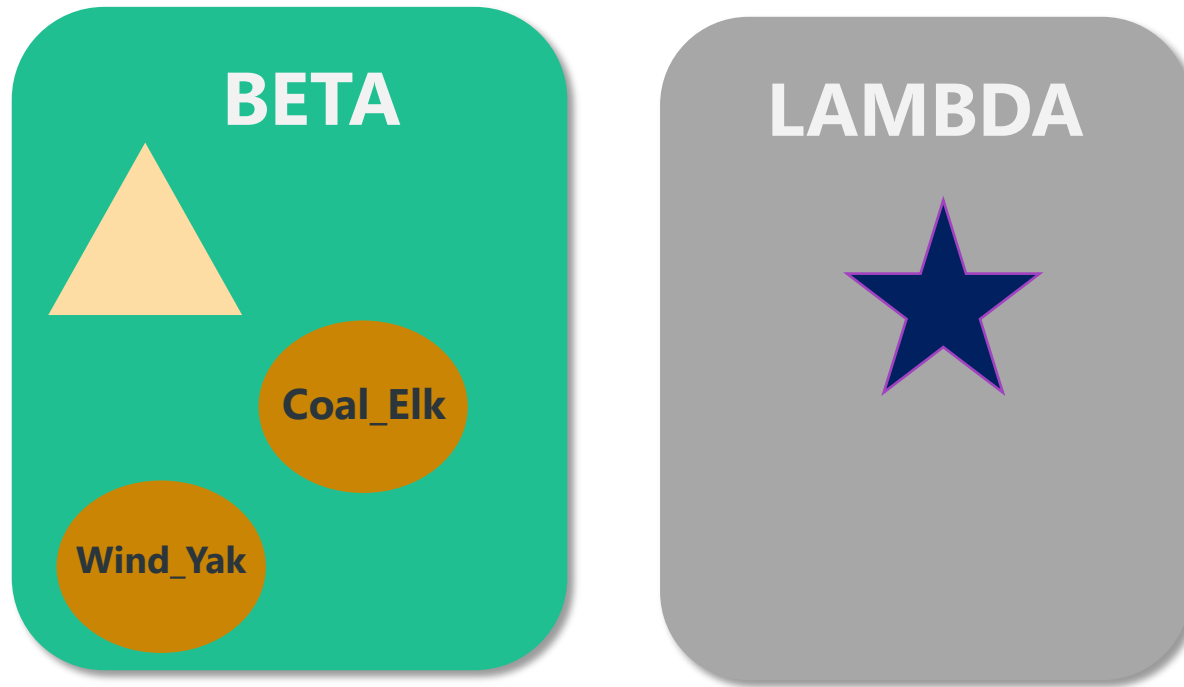


Sample Data				
All Entities participating in GHG Tracking and Reporting				
LIFE Beta	6/1/2024	1.00		
<b>Resource Data</b>				
	Resource	Production MW	Emission Factor	Production
	Owned Coal_Elk	50	0.7	
	Owned Wind_Yak	100	0	
<b>Load Data</b>				
	Load	MW		
	Beta_Ld	100		
<b>Residual Data</b>				
	MW	Methodology	Residual Emissions	
	-35	Avg	N/A	
LIFE Gamma	6/1/2024	1.00		
<b>Resource Data</b>				
	Resource	Production MW	Emission Factor	Production
	Contracted Coal_Elk	N/A	0.7	
	Contracted Wind_Yak	N/A	0	
	Contracted Wind_Hare	N/A	0	
<b>Load Data</b>				
	Load	MW		
	Gamma_Ld	225		
<b>Residual Data</b>				
	MW	Methodology	Residual Emissions	
	-35	Avg	N/A	
LIFE Delta	6/1/2024	1.00		
<b>Resource Data</b>				
	Resource	Production MW	Emission Factor	Production
	Owned Wind_Hare	125	0	

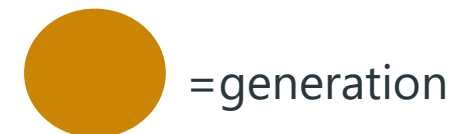
# Go to Spreadsheet 'Sample Case 2' Tab

# **SAMPLE CASE 3**

# SAMPLE DATA – SETUP



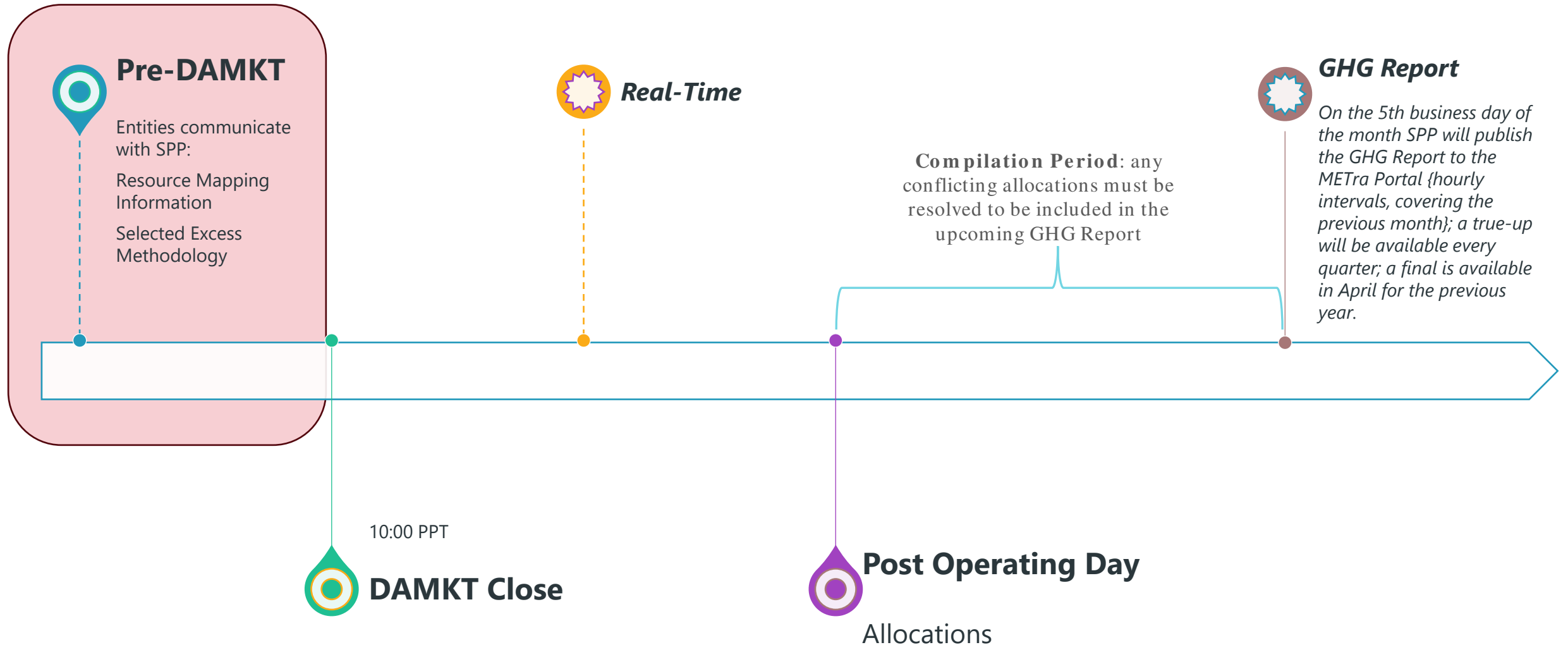
- Both entities are within the M+ Footprint
- BETA - elected to participate in GHG Tracking and Reporting
  - Both gen and load
- LAMBDA – Non-Reporting Entity
  - Power Marketer



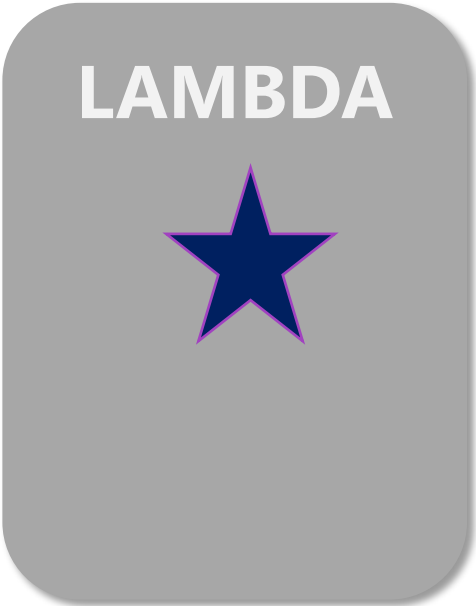
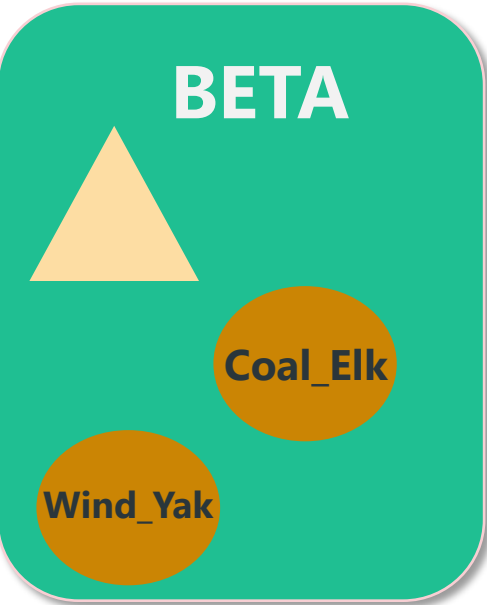
# PROTOCOL LANGUAGE 'GHG RESOURCE MAPPING AND ALLOCATION' SECTION

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- With respect to contracted-for Resources, the Market Participant must provide confirmation from the relevant counterparty or counterparties in order for the Allocation(s), or change in Allocation(s), to be reflected in the GHG Report.
- With respect to contracted-for Resources, the Market Operator will reflect the identified relocation counterparty in the applicable GHG Report.

# M+ GHG TRACKING AND REPORTING TIMELINE



# SAMPLE DATA – METRA CLAIMS PRIOR TO DISPATCH

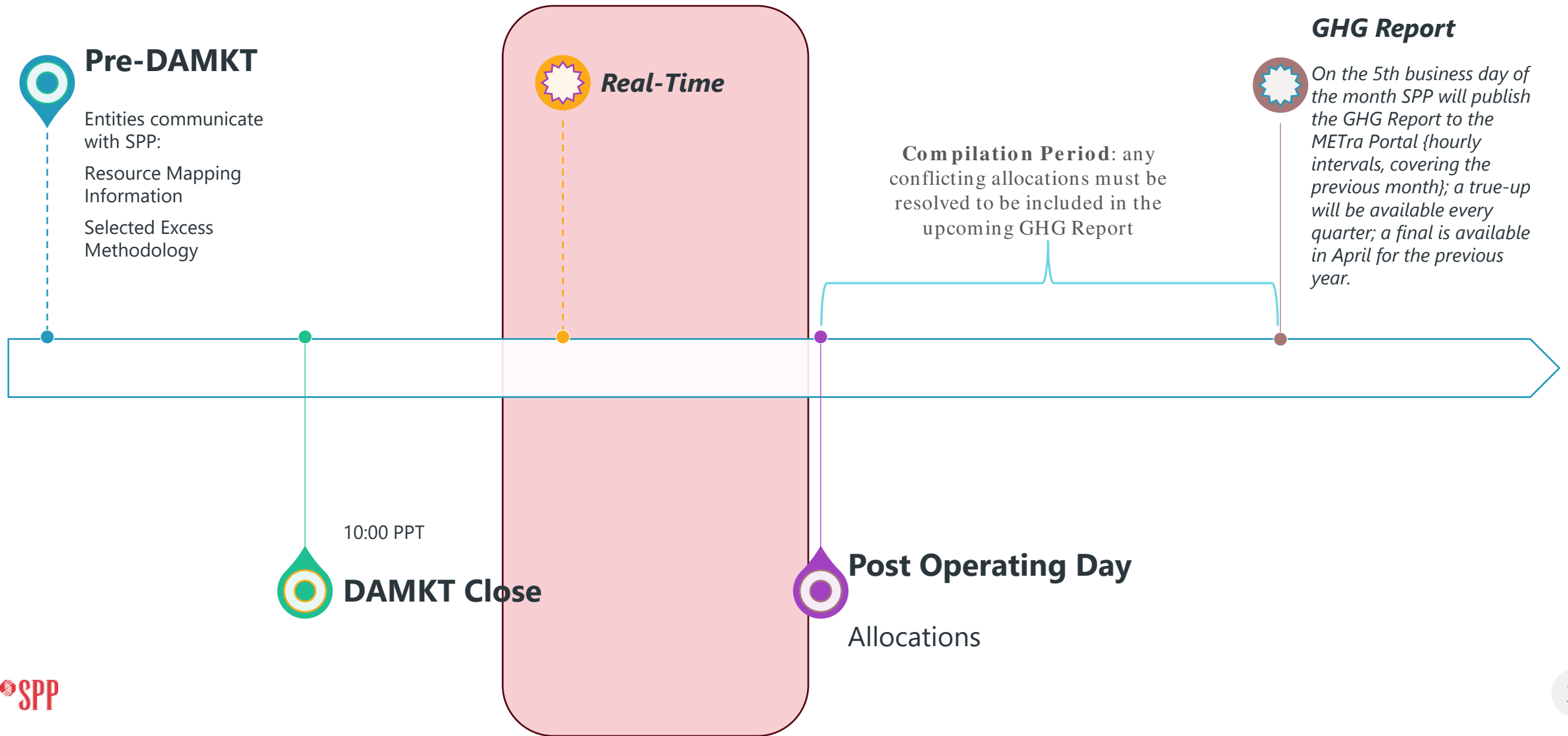


BETA	Owned	Contracted
	Wind_Yak	N/A
	Coal_Elk	<del>*100% output to Lambda</del>

LAMBDA	Owned	Contracted
	N/A	<del>*100% output of Coal_Elk</del>

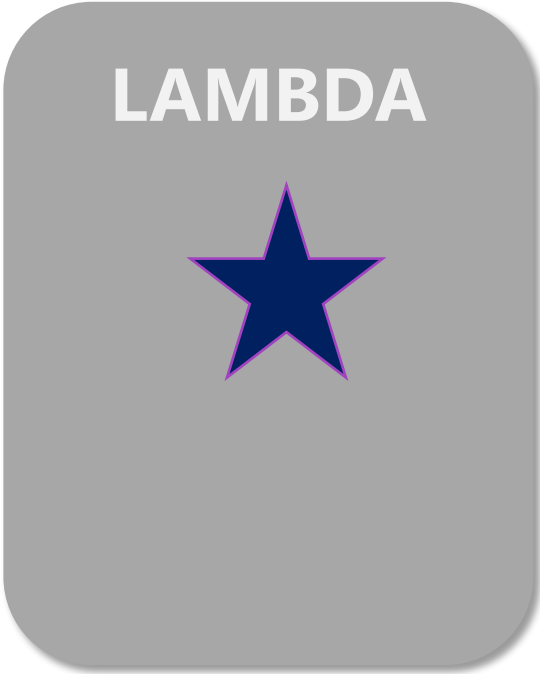
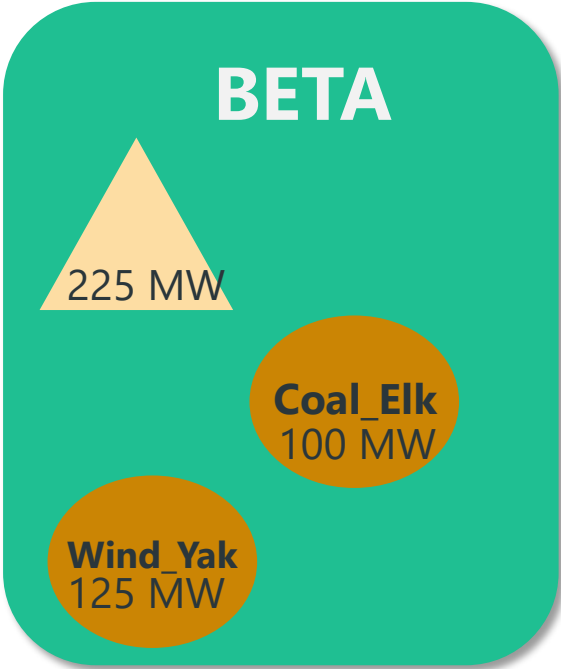
\*LAMBDA is Non-Reporting so contract confirmation did not occur, therefore the contract will not be reflected for Allocations in the GHG Report

# M+ GHG TRACKING AND REPORTING TIMELINE



# SAMPLE DATA – MARKET DISPATCH ILLUSTRATION – 01:00

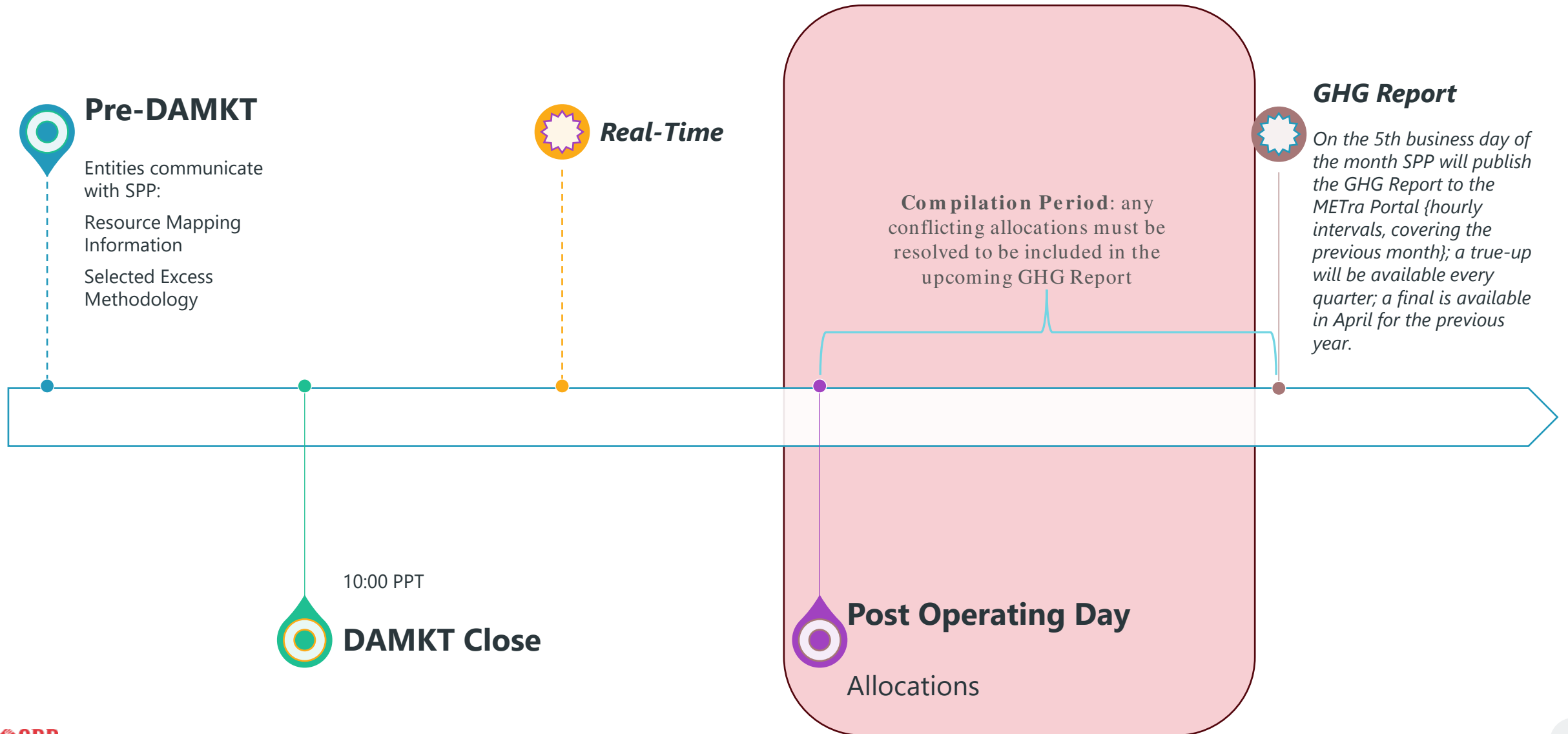
Entity	Load (MW)
Beta	225
Lambda	N/A
TOTAL SYSTEM	225 MW



Entity	Production (MW)
Beta	225
Lambda	0
TOTAL SYSTEM	225 MW



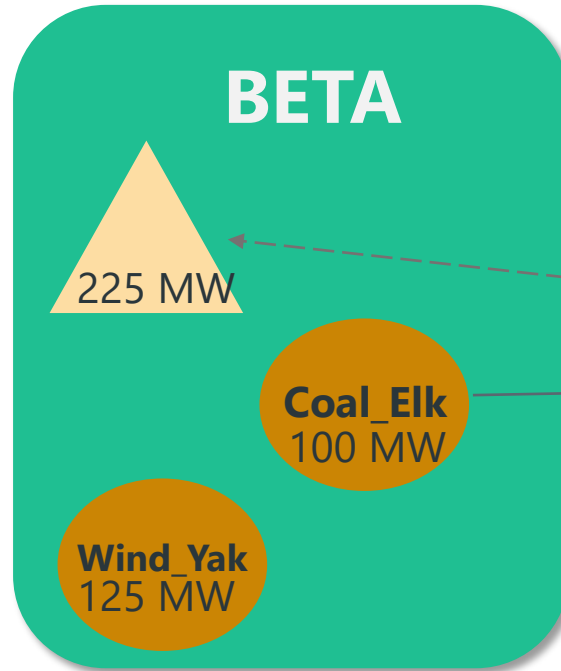
# M+ GHG TRACKING AND REPORTING TIMELINE



# SAMPLE DATA- GHG TRACKING AND REPORTING (OVERLAY OF CLAIMS)

## Beta

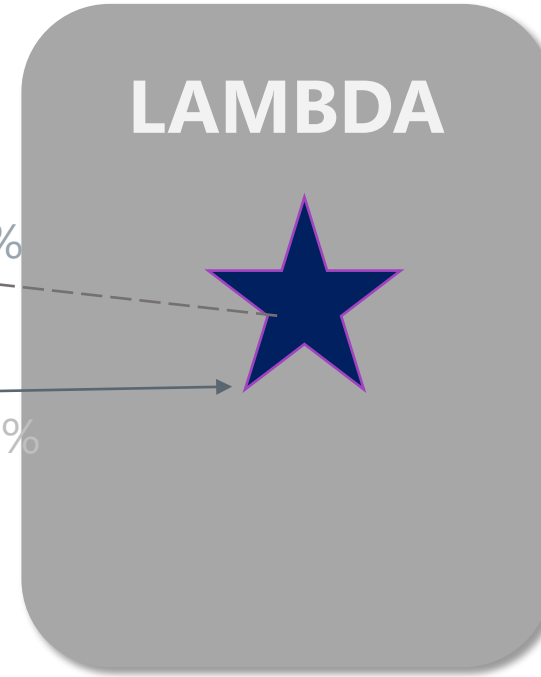
100 MW Coal\_Elk  
125 MW Wind\_Yak  
Allocated Total:  
225 MW  
Total Load:  
225 MW  
Residual Energy:  
*0 MW*



## LAMBDA

## Lambda

0 MW  
Allocated Total:  
0 MW  
Total Load:  
0 MW  
Residual Energy:  
*0 MW*

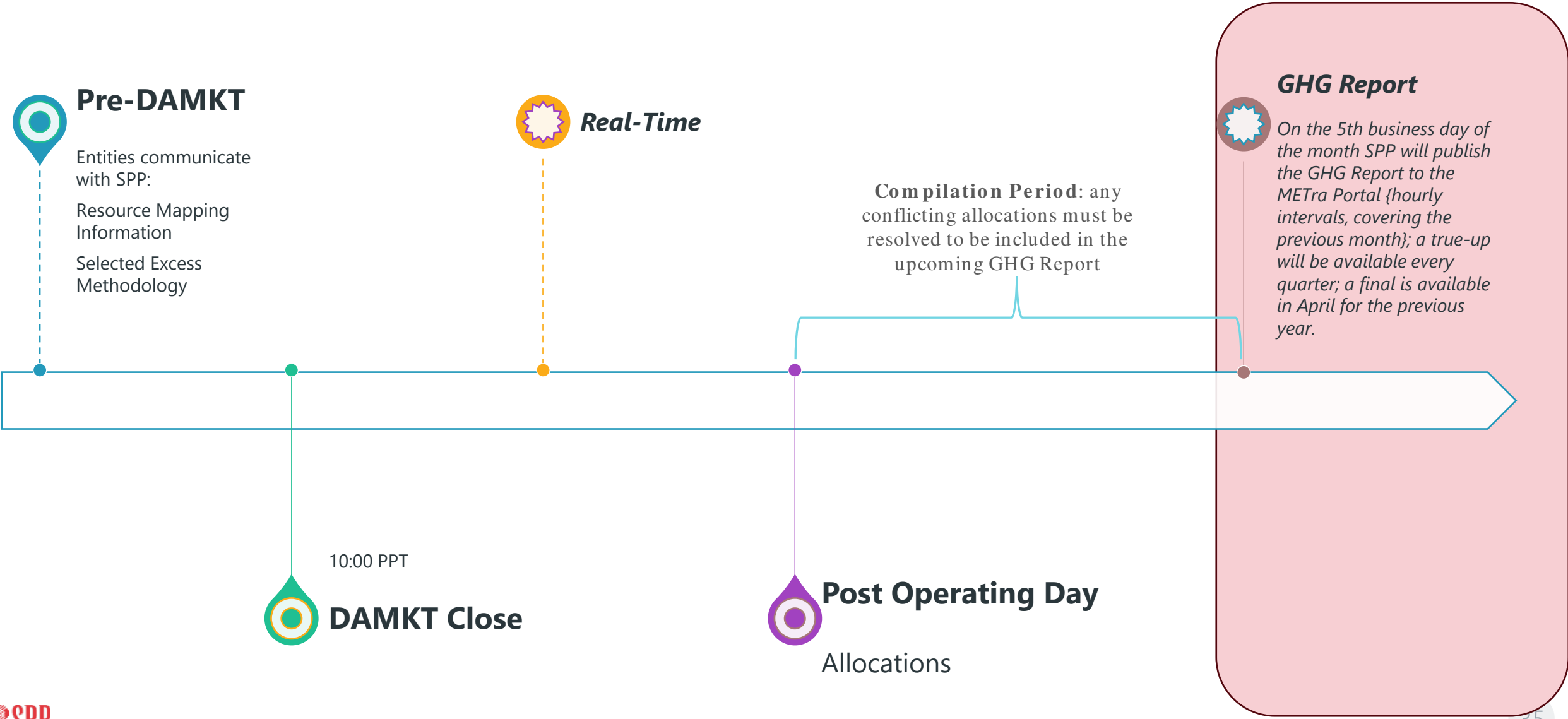


25%

100%

\*LAMBDA is Non-Reporting - contract confirmation did not occur, therefore the contract will not be reflected for Allocations in the GHG Report

# M+ GHG TRACKING AND REPORTING TIMELINE



Sample Data				
All Entities participating in GHG Tracking and Reporting				
LIFE Beta	6/1/2024	1.00		
<b>Resource Data</b>				
Resource	Production MW	Emission Factor	Production	
Owned Coal, Elk	50	0.7		
Owned Wind, Yak	100	0		
<b>Load Data</b>				
Load	MW			
Beta, Ltd	100			
<b>Residual Data</b>				
MW	Methodology	Residual Emissions		
-15	Avg	N/A		
LIFE Gamma	6/1/2024	1.00		
<b>Resource Data</b>				
Resource	Production MW	Emission Factor	Production	
Contracted Coal, Elk	N/A	0.7		
Contracted Wind, Yak	N/A	0		
Contracted Wind, Hare	N/A	0		
<b>Load Data</b>				
Load	MW			
Gamma, Ltd	225			
<b>Residual Data</b>				
MW	Methodology	Residual Emissions		
-35	Avg	N/A		
LIFE Delta	6/1/2024	1.00		
<b>Resource Data</b>				
Resource	Production MW	Emission Factor	Production	
Owned Wind, Hare	125	0		

# Go to Spreadsheet 'Sample Case 3' Tab

# TAKEAWAYS

# TAKEAWAYS

- Tracking and reporting system supports needs of entities and regulators for accurate load-based accounting
  - Resource and entity specific data will be provided to participating entities
  - Regulators can access resource and entity specific data pertaining to LREs under their jurisdiction
- Tracking and reporting system provides comprehensive and transparent data for market participants and the public generally
  - All generation and the associated emissions is accounted for
  - Even where aggregated, there is no 'lost emissions' or MW
  - Data can be tracked, compiled and published for the market as a whole, and designated sub-regions, including non-reporting LREs collectively