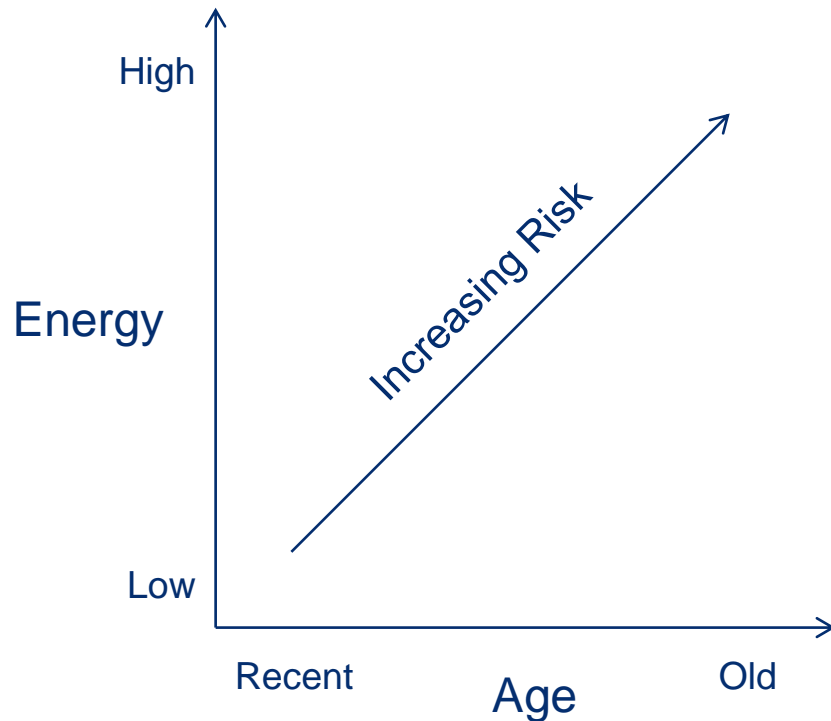


**Actions PA0406 and  
PA0603: Develop models  
of settlement patterns to  
help inform Modification  
0483.**

June 2014

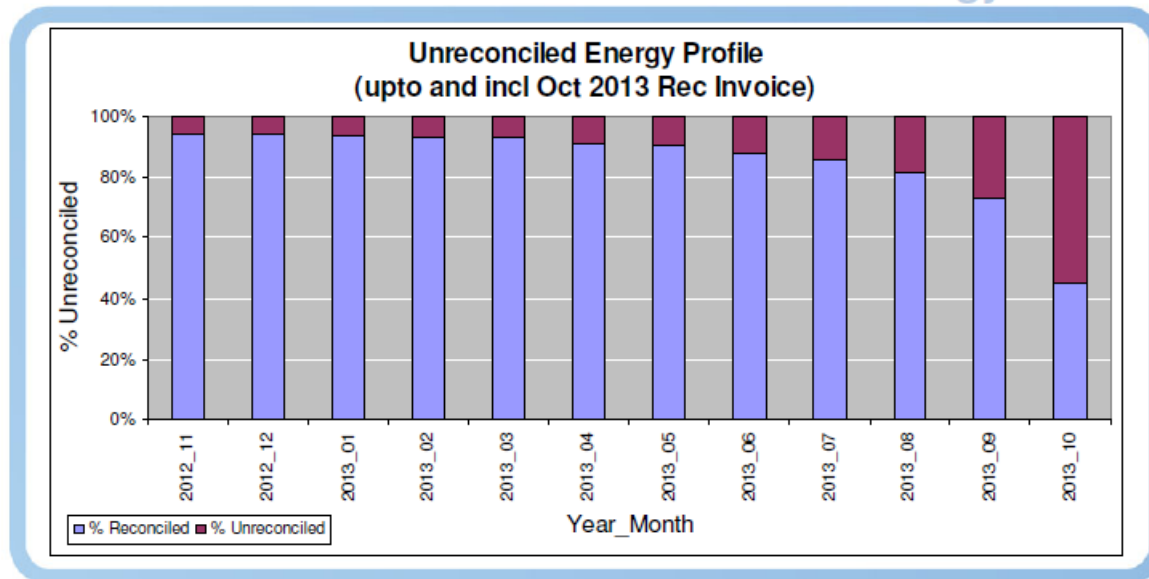
# Modification 0483 intends that shippers are incentivised to reduce unreconciled energy.

- High volumes of energy which remain unreconciled for a long time present the most risk to Shippers.
  - Subject to confirmation by the academic study.



# Reconciliation occurs as and when meter readings are received by Xoserve.

- Analysis undertaken by Xoserve for DESC shows that for LSP sites:
  - 45% of energy is reconciled within 1 month.
  - 90% of energy is reconciled within 6 months.
  - 95% of energy is reconciled within 12 months.



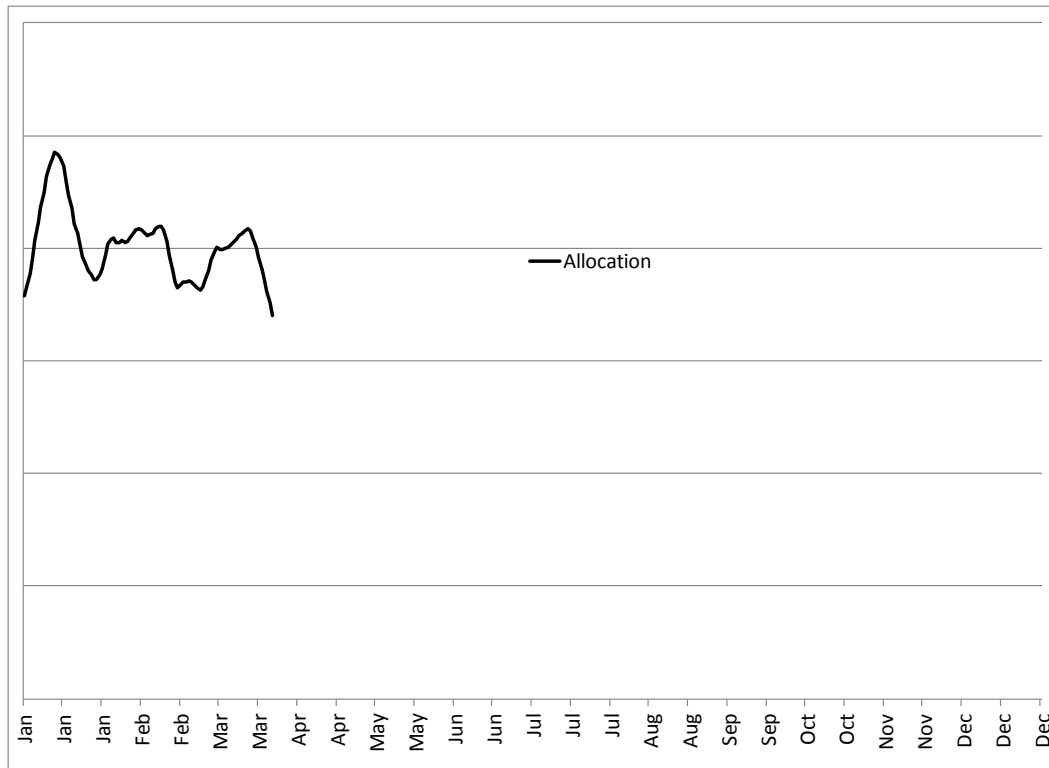
Source: DESC 12<sup>th</sup> February 2014, "04 February 2014 Presentation - NDM Algorithm Performance (Gas Year 2012/13)"

# Incentives and targets could take a number of different forms.

- Dimensions / options for targets:
  - Energy unreconciled for more than x months.
  - Unreconciled energy greater than y kWh.
  - At Shipper level or at MPRN level.
- One example of a possible target:
  - A shipper must ensure that 90% of their energy allocation is reconciled to actual reads within 12 months.
  - Incentives applied at a per kWh and per day rate for unreconciled energy more than 12 months old.
- Note:
  - Mod 398 allows reconciliation to occur for 3 to 4 years. Some energy will remain unreconciled at the end of this period.
  - On Nexus implementation, LSPs will reconcile for this whole period, SSPs will only reconcile back to Nexus implementation date.

# Illustration of allocation and subsequent reconciliation over 12 months.

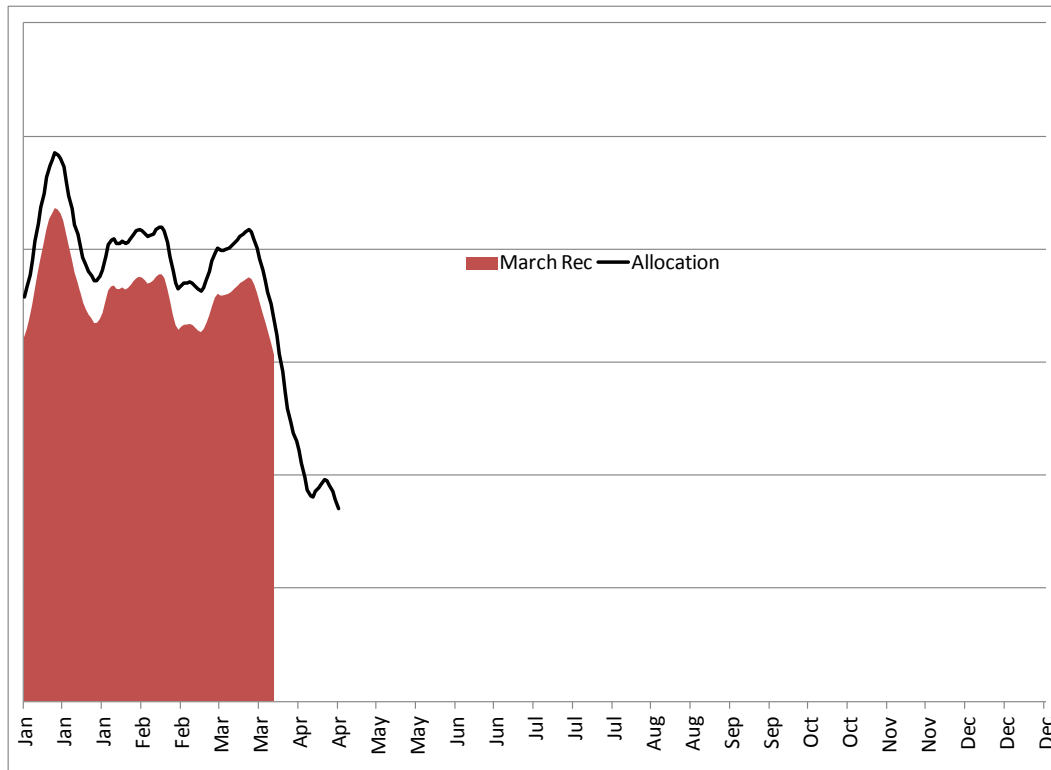
- EUC01B customer, meter read quarterly.



- Initial daily allocations made for January, February, March.

# Illustration of allocation and subsequent reconciliation over 12 months.

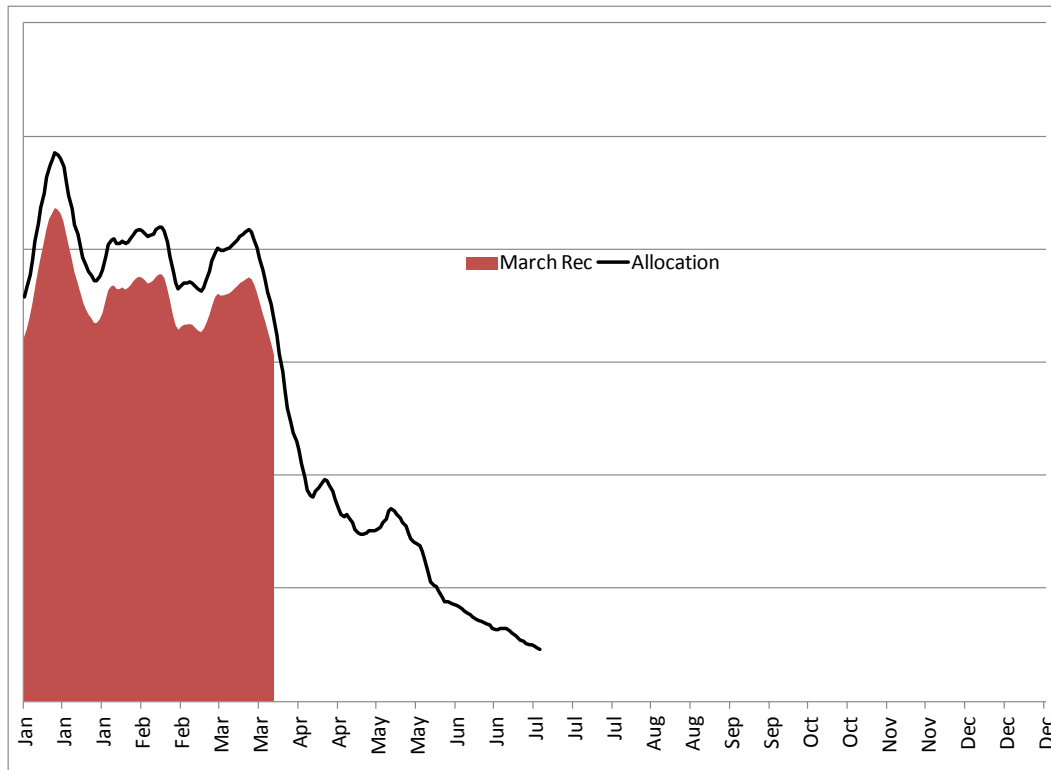
- EUC01B customer, meter read quarterly.



- Initial daily allocations made for January, February, March.
- Read submitted at the end of March.
- Allocation reconciled to actual consumption, profiled as per allocation.

# Illustration of allocation and subsequent reconciliation over 12 months.

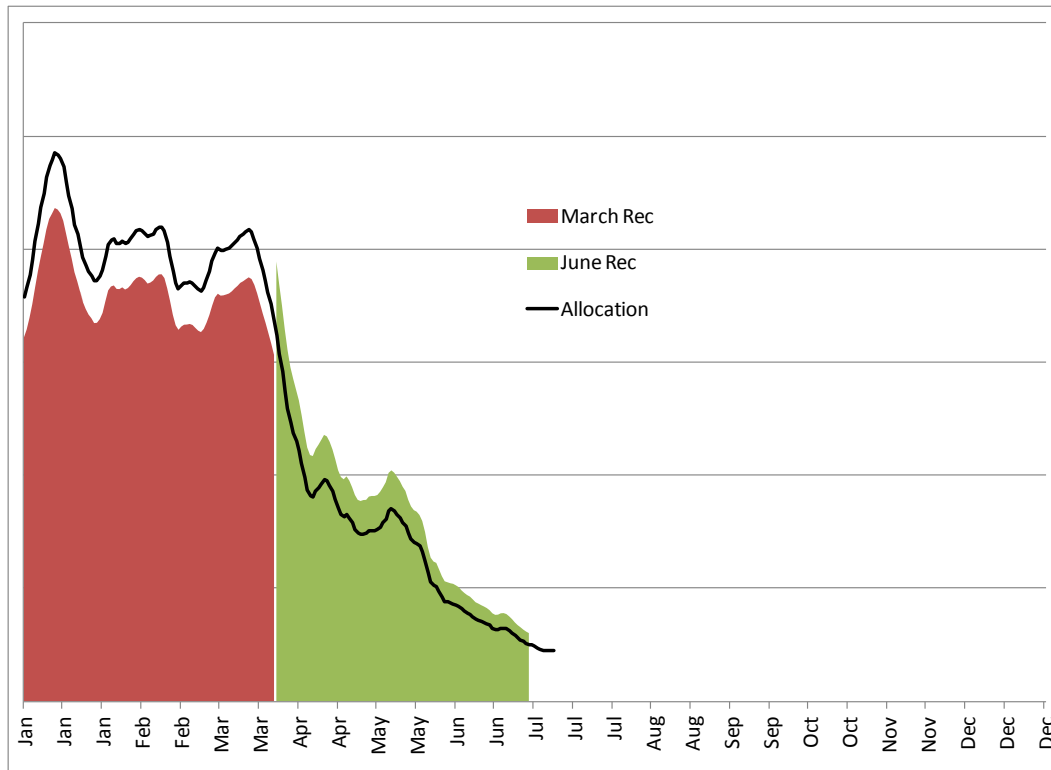
- EUC01B customer, meter read quarterly.



- Initial daily allocations made for January, February, March.
- Read submitted at the end of March.
- Allocation reconciled to actual consumption, profiled as per allocation.
- Daily allocations continue for April, May, June.

# Illustration of allocation and subsequent reconciliation over 12 months.

- EUC01B customer, meter read quarterly.

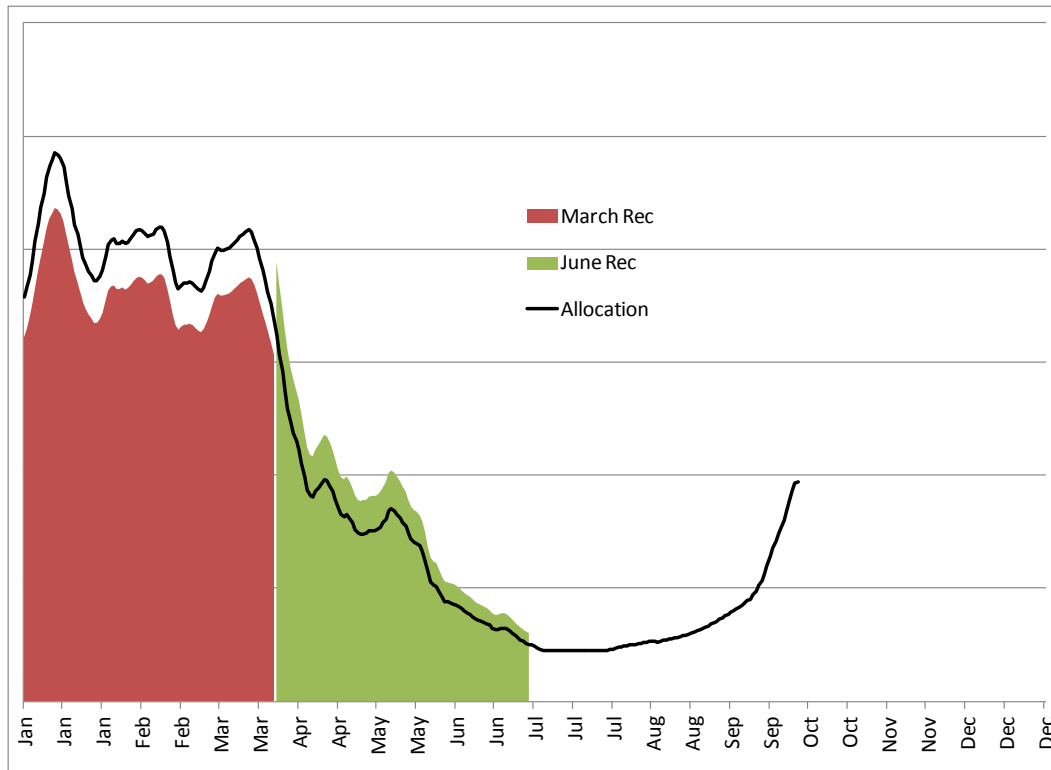


- Initial daily allocations made for January, February, March.
- Read submitted at the end of March.
- Allocation reconciled to actual consumption, profiled as per allocation.
- Daily allocations continue for April, May, June.
- Read submitted at the end of June.
- Consumption reconciled.



# Illustration of allocation and subsequent reconciliation over 12 months.

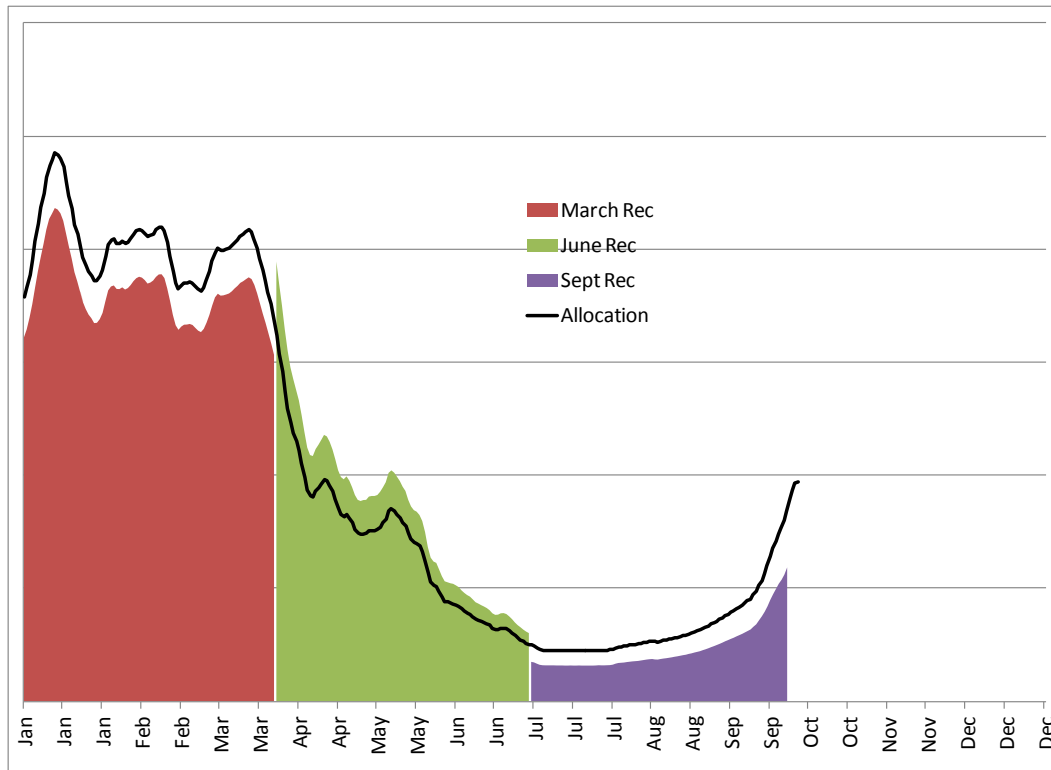
- EUC01B customer, meter read quarterly.



- Initial daily allocations made for January, February, March.
- Read submitted at the end of March.
- Allocation reconciled to actual consumption, profiled as per allocation.
- Daily allocations continue for April, May, June.
- Read submitted at the end of June.
- Consumption reconciled.
- Process repeats for rest of the year.

# Illustration of allocation and subsequent reconciliation over 12 months.

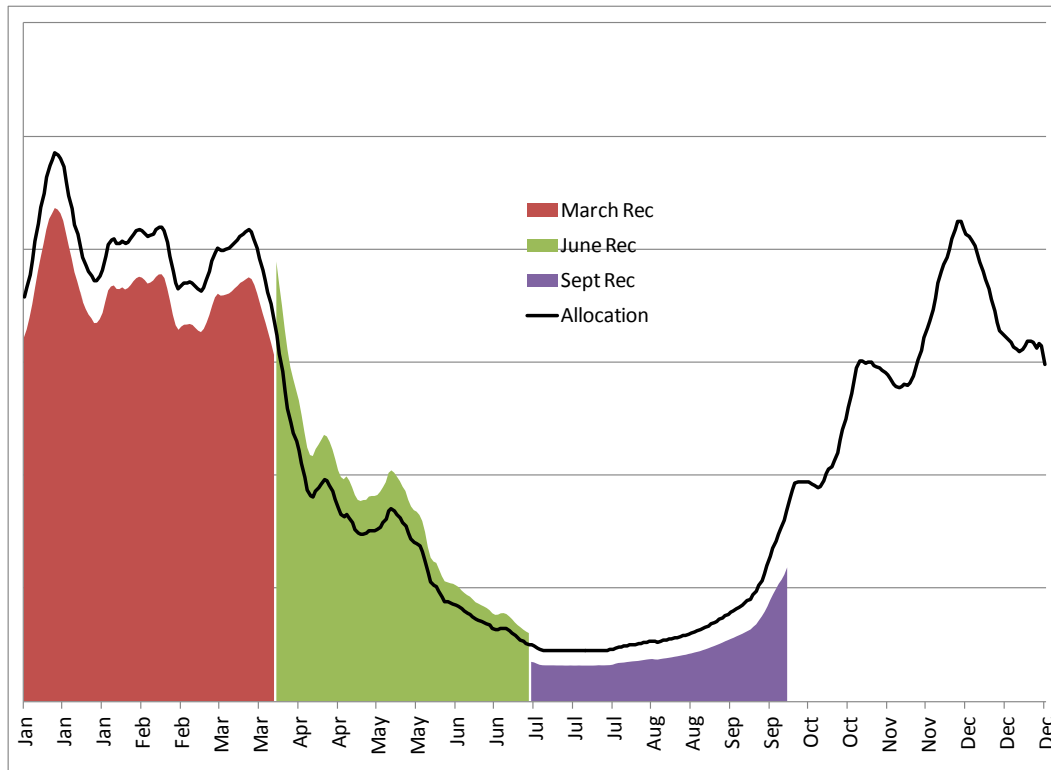
- EUC01B customer, meter read quarterly.



- Initial daily allocations made for January, February, March.
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- Consumption reconciled.
- Process repeats for rest of the year.

# Illustration of allocation and subsequent reconciliation over 12 months.

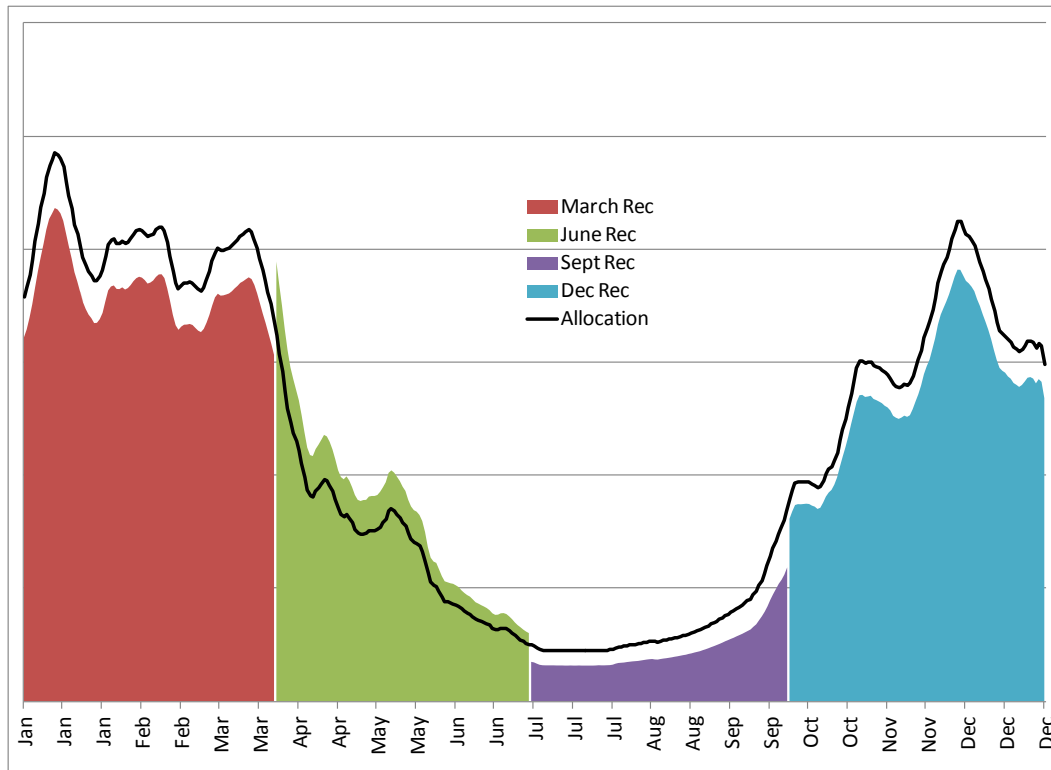
- EUC01B customer, meter read quarterly.



- Initial daily allocations made for January, February, March.
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- EUC01B customer, meter read quarterly.

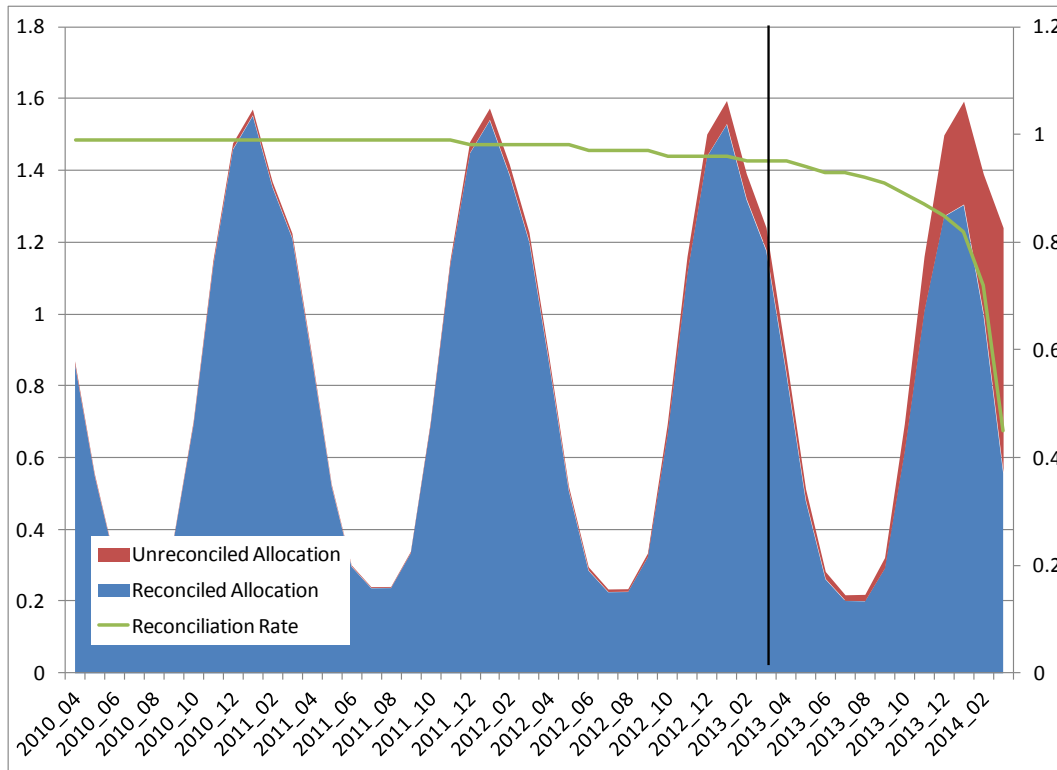


- Initial daily allocations made for January, February, March.
- Read submitted at the end of March.
- Allocation reconciled to actual consumption, profiled as per allocation.
- Daily allocations continue for April, May, June.
- Read submitted at the end of June.
- Consumption reconciled.
- Process repeats for rest of the year.

- If EUC is correct and AQ is accurate, the difference between allocated and reconciled volume will be small at all times in the year.

# The profile if unreconciled energy changes over a normal year.

- Shipper with a portfolio of 10 TWh, all EUC01B

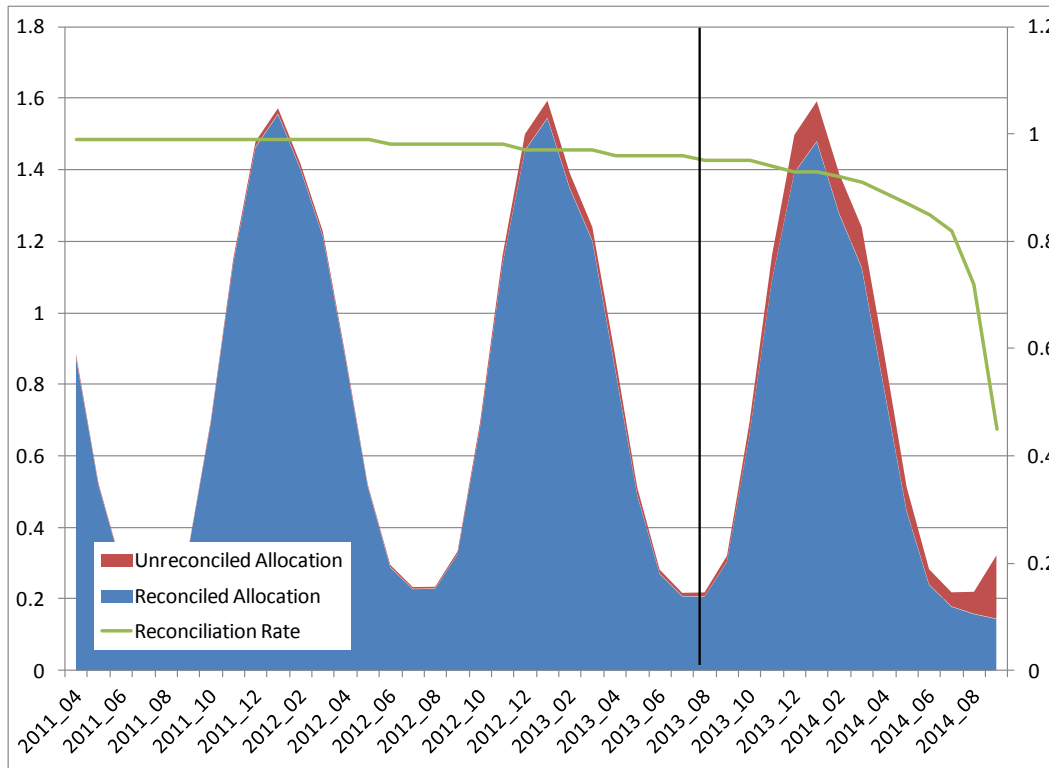


- Unreconciled energy as at March.

- Assumes reconciliation rate shown on slide 3.

# The profile of unreconciled energy which is over 12 months old also changes.

- Shipper with a portfolio of 10 TWh, all EUC01B

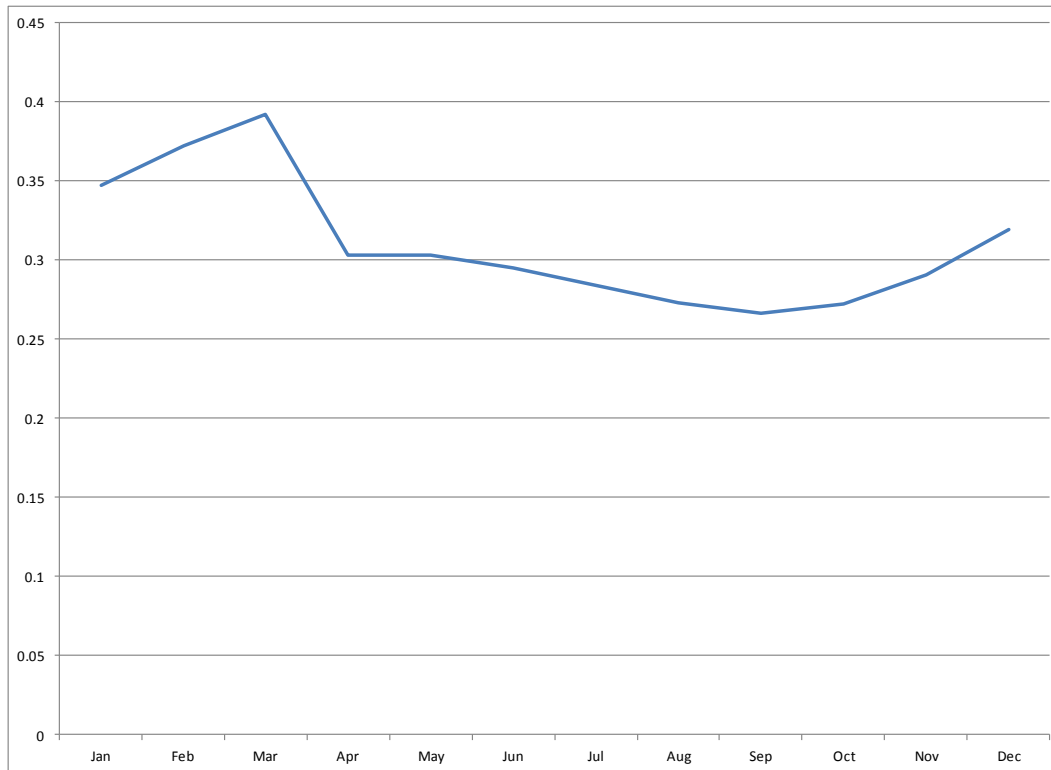


- Unreconciled energy as at September.

- Assumes reconciliation rate shown on slide 3.

# There are seasonal variations in the amount of unreconciled energy.

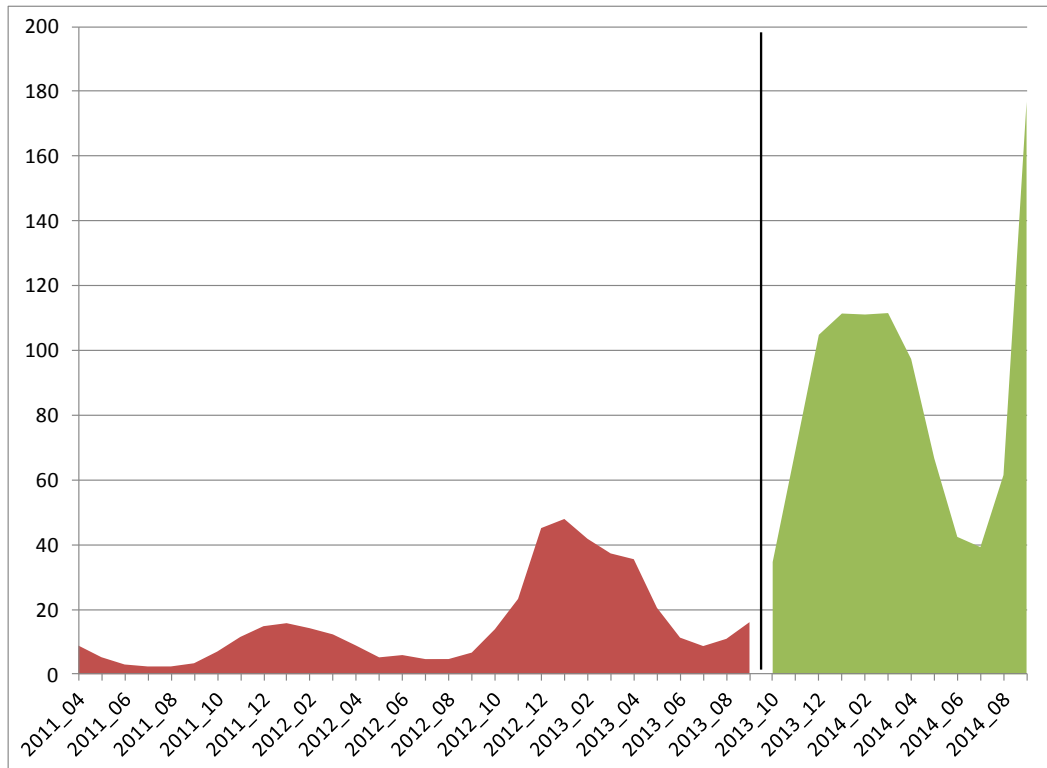
- EUC01B customer



- Sum of unreconciled energy > 12 months old.
- This effect would be exaggerated by e.g. a cold winter.
- The jump from March to April is due to Mod 398.
- The effect would be less pronounced for EUCs with a flatter profile.
- Assumes reconciliation rate shown on slide 3.

# Does older unreconciled energy present a larger risk?

- EUC01B customer



- Should only energy which has remained unreconciled for more than 12 months be targeted?
- Should there be a greater incentive to reconcile allocated energy e.g. more than 24 months old than e.g. more than 15 months old?



# Any charge incurred by a shipper should be redistributed. There are two options:

- Redistribution excluding “offending” shipper. This does not work.
- Consider this example where all shippers present risk proportionally to their market share:

	Shipper A	Shipper B	Shipper C	Total
Market Share of AQ	20%	30%	50%	
Unreconciled Gas Charge	20	30	50	100
Redistribution of Incentive:				
Shipper A's Share of Shipper B's Charge	29%	9		
Shipper A's Share of Shipper C's Charge	40%	20		
Shipper B's Share of Shipper A's Charge	38%	8		
Shipper B's Share of Shipper C's Charge	60%	30		
Shipper C's Share of Shipper A's Charge	63%		13	
Shipper C's Share of Shipper B's Charge	71%		21	
Take Out	29	38	34	100
Pay In	20	30	50	100
Net (positive is credit)	9	8	-16	0

- Redistribution including “offending” shipper.

	Shipper A	Shipper B	Shipper C	Total
Market Share of AQ	20%	30%	50%	
Unreconciled Gas Charge - Pay In	20	30	50	100
Take Out	20	30	50	100
Net	0	0	0	0