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PN UNC Workgroup
(Settlement – Demand Estimation)

22nd August 2011

Background

- Settlement is reviewing NDM Allocation processes
- Current process uses Scaling Factor to ensure all gas is allocated
- DM Meters currently exempt from scaling
- New arrangements under Project Nexus
  - DM meters included in sharing of unallocated energy
  - Increasing numbers of Smart/AMR meters – also included in Allocation Scaling

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Impact on Allocation

- Need for a new improved estimation technique for Process 3 & 4 sites
- Need a more robust estimate which can be combined with actual DM/Smart/AMR measurements when calculating scaling
- Otherwise, new cross-subsidies will arise in allocation which will only be corrected by Reconciliation

Current NDM Apportionment Formula

average daily consumption over the year

Profiled daily consumption under average weather

Adjustment to daily consumption to take account of prevailing weather and sensitivity to deviation from average weather

Scale to ensure everything adds up

Note, this is an apportionment formula, not a supply point level forecasting formula

Current Approach to Weather Correction

- Weather Correction Factor (WCF)

$$= \frac{\text{Total Actual NDM Demand} - \text{Seasonal Normal NDM Demand}}{\text{Seasonal Normal NDM Demand}}$$

- WCF not only based on weather, variation in demand includes weather, but also economic, social and other factors
- Daily Adjustment Factor (DAF) is relative weather sensitivity of EUC compared to weather sensitivity of total NDM sector in LDZ

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Suggested Approach to Weather Correction

- Retain Weather Correction element of formula

  = (1 + [WCF * DAF])

- New WCF

  = Seasonal Normal CWV – Actual CWV

  CWV = Composite Weather Variable i.e. standard measure of weather

- Daily Adjustment Factor (DAF) is redefined as % change in demand for 1° of CWV change for the EUC for the gas day

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Suggested Approach - Impacts

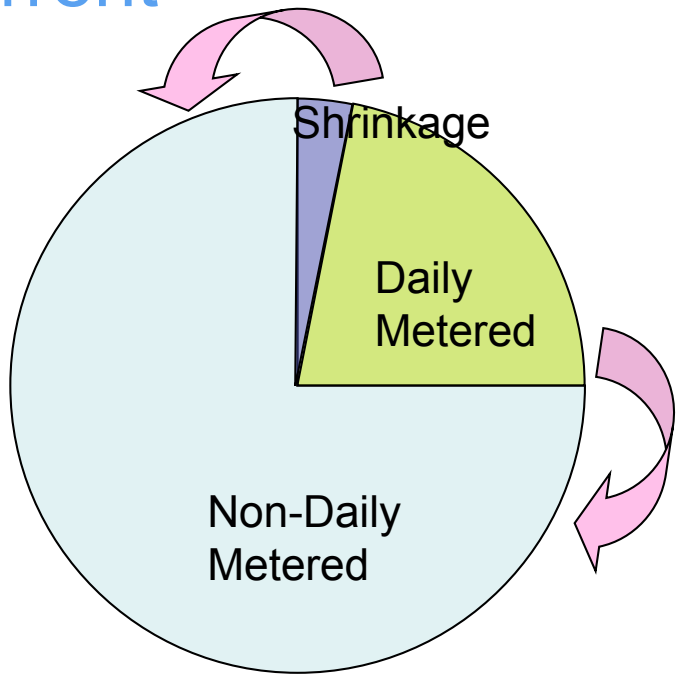
- Can calculate a standalone estimate of consumption for an NDM site, based on seasonal normal usage patterns plus observed weather sensitivity
  - Note: can never be 100% accurate – meter point reconciliation for all meters corrects allocation
  - Will probably still need CWV summer cut-offs and cold weather upturn
  - Probably still appropriate to have WAR Bands
- Total demand – (Sum of all estimates + all actual measurements) = Unallocated Gas

Suggested Approach - Nominations

- Same approach can be used for Nominations
- In Day Ahead mode, formula can use forecast weather (CWV)
- Total forecast demand – (Sum of all forecast site estimates + all DM Nominations) = Forecast Unallocated Gas
- Consistent approach should minimise difference between Nominations and Allocations

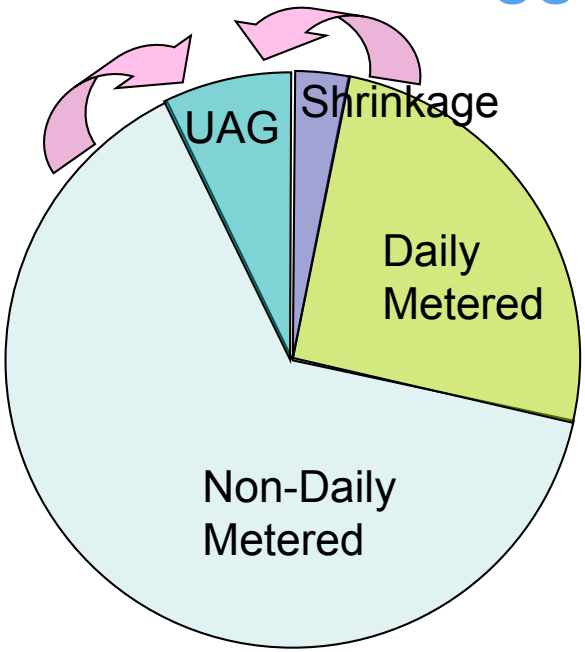
Current v Suggested Allocation

Current



Current: DM is measured so …
NDM is determined by deduction

Suggested



Suggested: DM is measured and NDM receives a stand-alone estimate so …
Unallocated Gas is determined by deduction

Caution – diagram not drawn to scale

Next steps

- Discussion of high level principle at PN UNC
- Agree working assumption for future allocation methodology or identify alternatives
- Refer to DESC for further development
  - Agreement of methodology and changes to formula/ definitions
  - Methodology for calculation of “new DAF”
  - Definition of EUCs, including any new EUCs
  - Review of methodology and approach to WAR Bands