

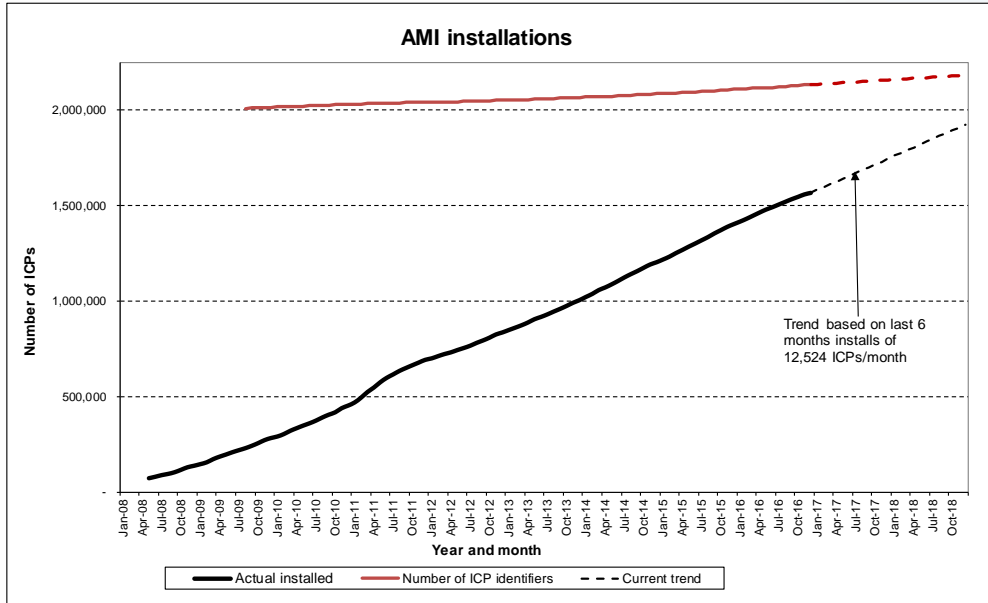
8 February 2017

Update for MEPs and ATHs

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ADVANCED METERING INFRASTRUCTURE (AMI)

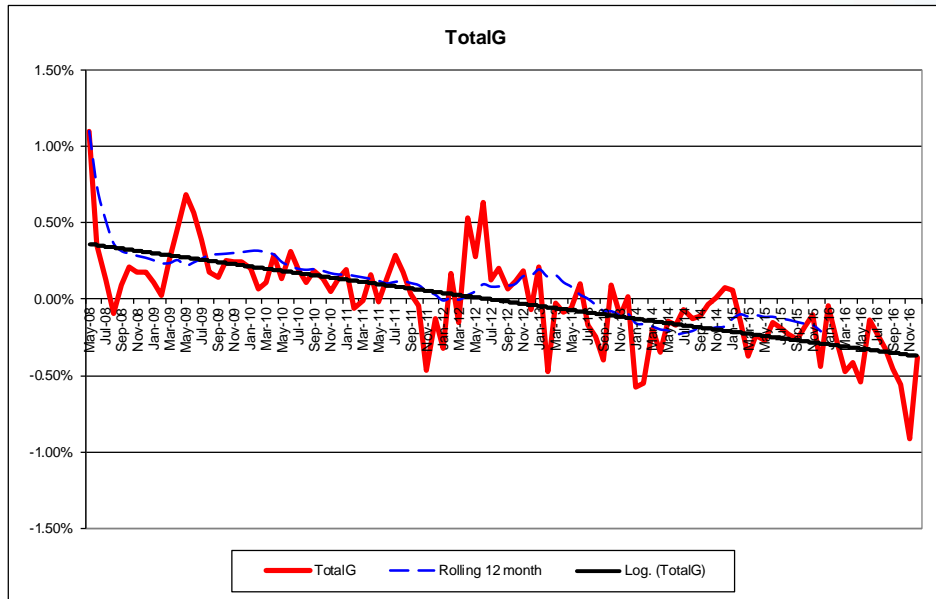


- As at 31 Dec 2016, 1,566,784 active and inactive ICP identifiers have AMI (73.45%)
- By Dec 2018, based on current trends, approx 1,867,377 (83%) ICP identifiers may have AMI

- AMI – Code does not contain specific definition, but clause 8 of Sch 10.6 states
.....applies when raw meter data can only be obtained from a metering equipment provider's back office....

UNACCOUNTED FOR ELECTRICITY (UFE)

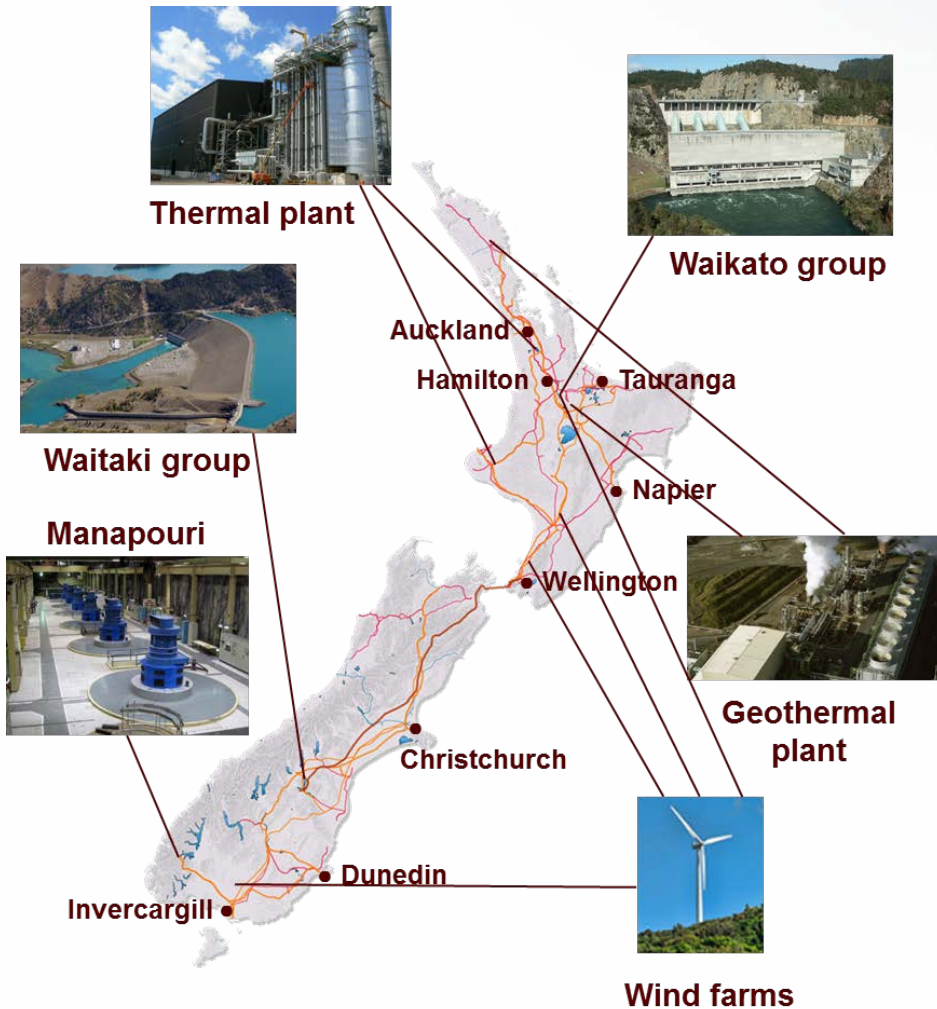
Total G



- The quantity of electricity unallocated per trading period per balancing area after all submissions, adjustments and losses taken into account
- Can be +ve or -ve

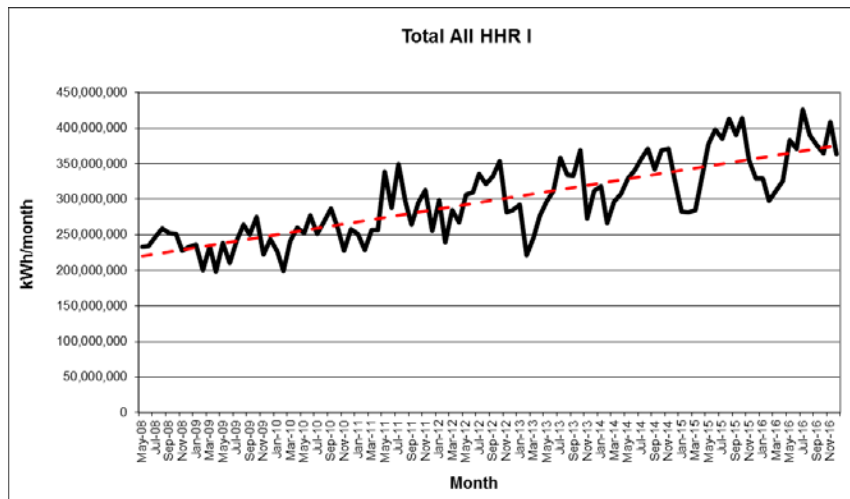
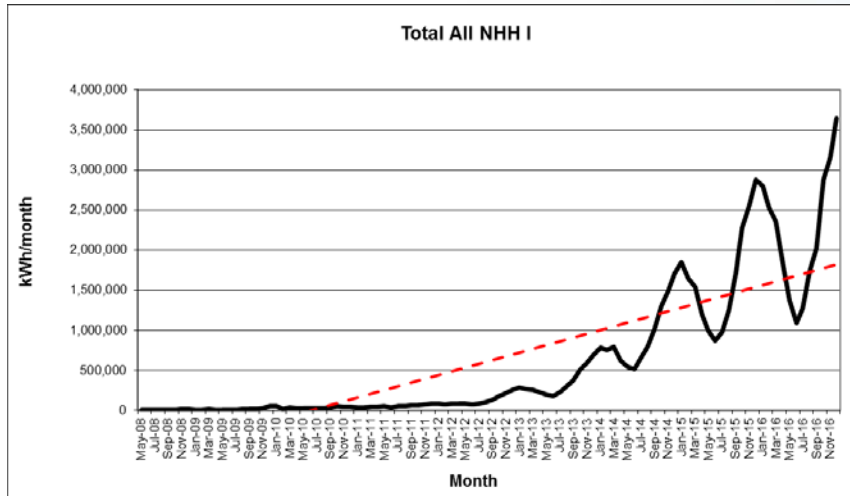
- Impacted by accuracy of
 - metering
 - submission information, data handling and meter readings
 - registry records
 - network reconciliation losses
- UFE varies by network
- R14 UFE
 - average network UFE = -0.15%
 - highest network UFE = 2.30% (BA 4.64%)
 - lowest network UFE = -1.16% (BA -4.06%)

TOTAL GENERATION



- Annual generation volume = 40,674 GWh
- Installed generation capacity = 9,565 MW
- Renewable generation
 - capacity = 86.6%
 - volume generated = approx 86% (last quarter)
- Peak demand 8 Aug 2016 = 6.452 MW
- Capacity/generation
 - Hydro 5,473 MW (60% of generation)
 - Thermal 1,970 MW (14% of generation)
 - Geothermal 1,006 MW (18% of generation)
 - Wind 701.76 MW (5% of generation)
 - Cogeneration 400.4 MW (3% of generation)
 - Unknown estimated 9.7 MW
 - Backup estimated 1.9 MW
- Connected at
 - Grid approx. 8,441 MW
 - Embedded approx. 1,209 MW

EMBEDDED GENERATION TRENDS



Embedded generation			
Fuel type	ICP identifiers	Installed capacity in MW	% of total capacity
Bio-mass	5	8.00	0.66%
Fresh water	95	288.24	23.85%
Geothermal	6	144.30	11.94%
Industrial processes	9	137.70	11.39%
Liquid fuel	123	103.40	8.56%
Natural gas	11	95.90	7.94%
Other	29	119.76	9.91%
Solar	12,215	46.86	3.88%
Undefined	10	0.02	0.00%
Wind	79	264.34	21.87%
Electric vehicle	-	-	0.00%
Tidal	1	0.00	0.00%
Total	12,583	1,209	

- Part 6 of the Code regulates connection requirements
- The Code requires all electricity conveyed to be measured (unless gifted)

AUTHORITY HAS CONSULTED ON CODE DEFINITION CHANGES

- Revoke definitions of **'connection'** and **'disconnection'** so these words have their ordinary meanings, consistent with other legislation
- Revoke definitions of **'electrically connecting'** and **'temporary energisation'**
- Amend definition of **'commissioning'** and **'decommissioning'**, to include the commissioning and decommissioning of an 'asset' and a 'point of connection'
- Replace **'energisation'** with **'electrically connect'**
- Replace **'de-energisation'** with **'electrically disconnect'**
- Replace **'connected'** and **'energised'** with **'electrically connected'**
- Replace **'disconnected'** and **'de-energised'** with **'electrically disconnected'**
- Replace **'disestablished'**, **'electrically isolated'**, and **'interconnect'** with, respectively, **'decommissioned'**, **'electrical conductors'**, **'electrical separation'** and **'connect'**
- Clarify that **'electrically unsafe'** has the meaning given to it in the Electricity (Safety) Regulations.
- Refer to <http://www.ea.govt.nz/development/work-programme/operational-efficiencies/code-review-programme/>

CLARIFICATION OF REQUIREMENTS

- For every point of connection (POC), a reconciliation participant is responsible for ensuring that there is an MEP and that for each energised ICP all electricity conveyed is quantified in accordance with the Code (clause 10.24)
- Reconciliation participant can energise an ICP only if 1 or more metering installations are certified (clause 10.33)
- Where an MEP accepts responsibility for a POC, it must provide a metering installation compliant with the Code (clause 10.20)
- Any participant must not directly or indirectly interfere with a metering installation for which it is not the metering equipment provider, unless
 - it is instructed or permitted to do so by the MEP responsible for the metering installation; or
 - the participant has an arrangement with the trader responsible for the metering installation as the gaining MEP who will be responsible for the metering installation (clause 10.12)

CLARIFICATION OF REQUIREMENTS

- A reconciliation participant must provide its MEP with access to relevant metering installations (clause 10.7)
- An MEP must ensure that any tests required for metering installation certification are conducted in accordance with this Code by an ATH contracted by the metering equipment provider (clause 10.38)
- An MEP must have a recertification programme for all its energised metering installations to ensure that each metering installation is recertified prior to the expiry date of its then current certification if the metering installation is not decommissioned (clause 15 of sch 10.7)
- An ATH must not certify a metering installation if the metering installation exceeds the maximum permitted error for the relevant metering installation category set out in Table 1 of Schedule 10.1, after applying any external compensation factors (clause 21 of Sch 10.7)

TRADER NOTIFICATIONS TO THE REGISTRY

- Registry will not allow an MEP to update registry metering records unless
 - the current trader has notified the registry of the MEP, and
 - the MEP has accepted the notification before another MEP is notified
- If a trader requests an MEP to provide a metering installation, and fails to notify the registry then
 - the trader has breached clause 10 of sch 11.1
 - the MEP cannot update registry metering records and has a consequential Code breach of clause 2 of sch 11.4
 - if the ICP identifier switches to another trader, the losing trader can no longer notify the registry of the MEP it provided the request to
- If a trader does not provide a notification to the registry MEPs should follow up with the trader

ELECTRICITY MARKET INFORMATION (EMI)

- The Authority's one-stop-shop for regular data on electricity markets
- Visit www.emi.ea.govt.nz

ACCESS TO METERING INSTALLATIONS

- Domestic consumer terms and conditions must have requirements for access
- Clause 10.7 requires traders to provide MI access to MEPs
- There appears to be an issue where consumers will not provide access to metering installations, being discussed with traders tomorrow



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