



AIE Seminar

Energy Pricing from a Retailer Perspective

25 June 2014

AIE Seminar – Retailer Perspective Topics

- Introduction
- Current Electricity Contract Market
- Pricing Customers from a Retailer Perspective
- LRET Market
- Carbon Repeal
- More about Progressive Green

AIE Seminar – Retailer Perspective Topics

Progressive Green was established in 2008

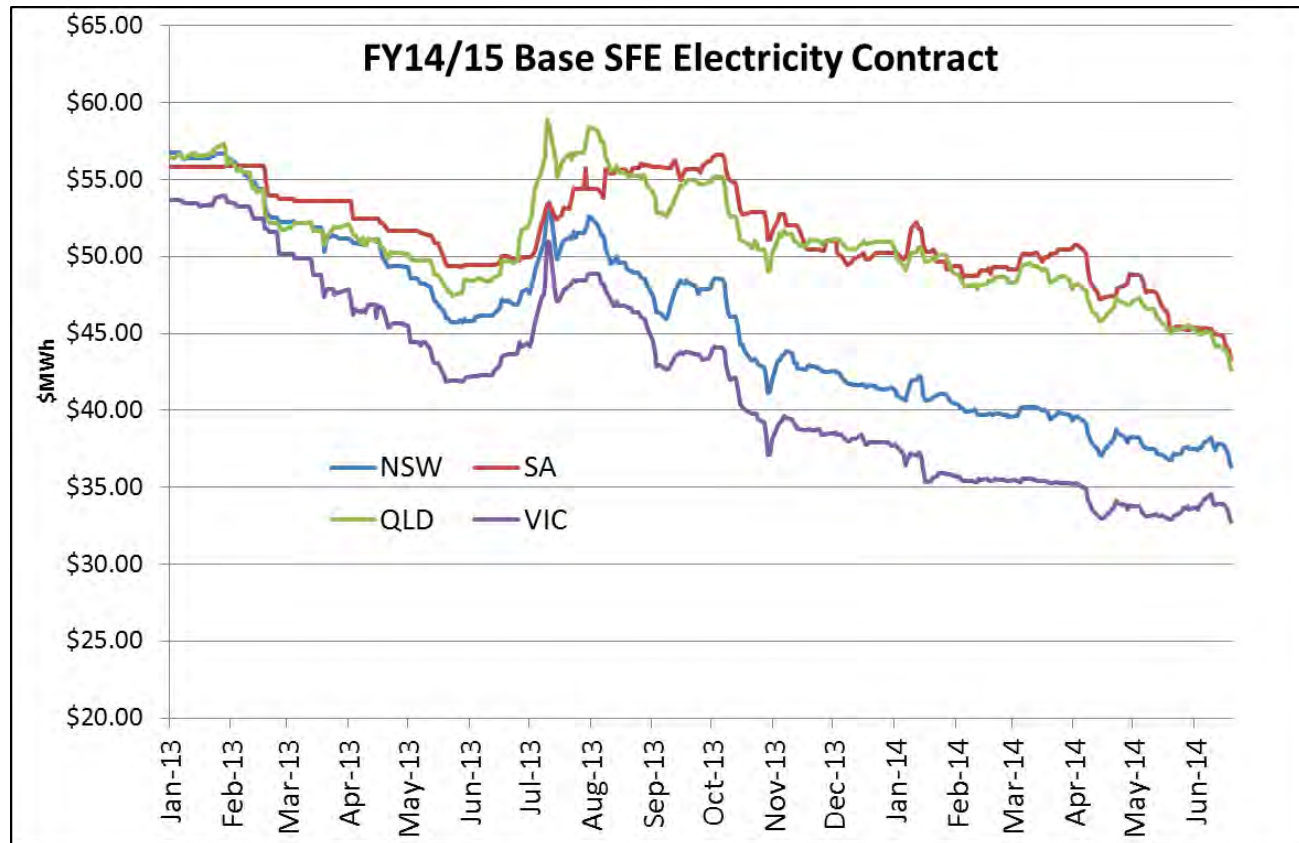
The business is focused on both sustainable outcomes, but also provides customers products with a strong commercial outcome and focus.

Progressive Green (PG) has a Retail License and the capability to directly trade in the Wholesale Electricity Market.

Currently, PG has over 40 customers covering ~ 120 large sites.

1. Current Electricity Contract Market

Forward Wholesale Contract Market



FY14/15 for the past 18 months

Market softening predominately due to:

1. Carbon Removal
2. Soft Energy Demand
3. Low underlying pool price volatility

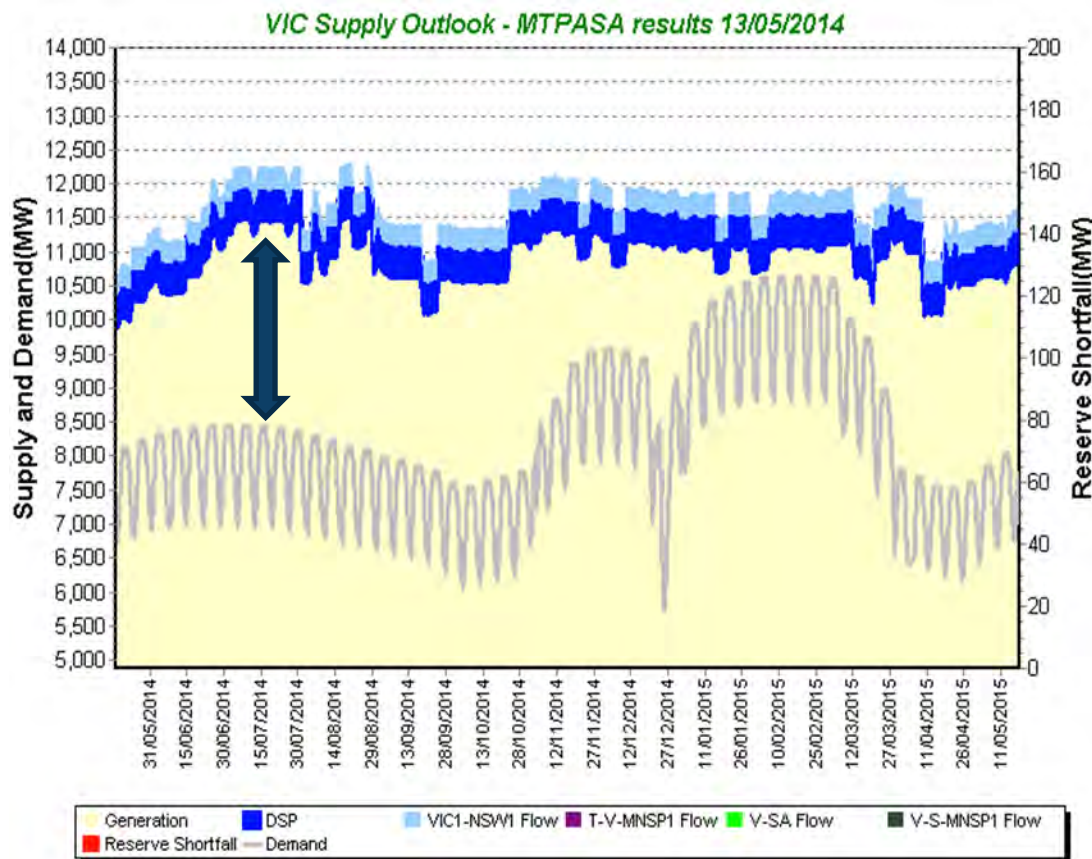
Victoria in Focus



Manufacturing is experiencing some contraction in VIC

Port Henry Smelter closure represents ~360MW of reduced VIC system demand.

MT PASA - Medium Term Projected Assessment of System Adequacy



AEMO publishes the MT PASA on a regular basis.

The MT PASA provides a reserve forecast for the next two years.

MT PASA process considers the availability of generation that can be made available within 24 hours.

The MT PASA Demand lines are based on the 10% probability of exceedence demand forecasts provided by the jurisdictional planning bodies and used in the ESOO.

~ 3500MW of excess capacity is available over the upcoming winter period

2. Pricing Customers from a Retailer Perspective

Customer Retailing – How are prices constructed

Key Metrics	2013	2012
MAX MW	0.64	0.59
AVG MW	0.32	0.32
Consumption MWh	2,764.0	2,853.1

Start with analysis of the Customer Data

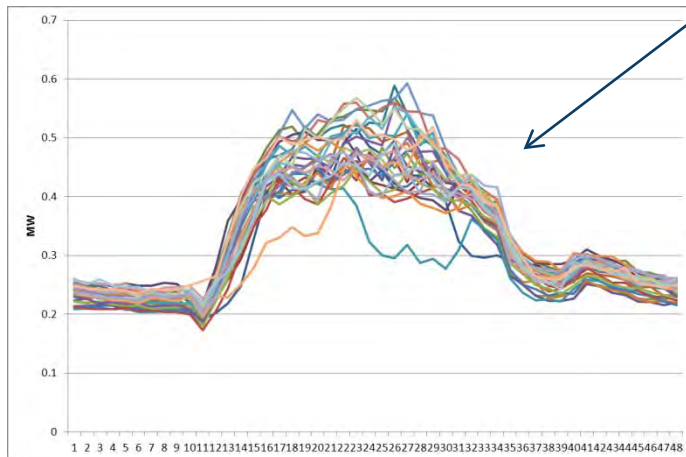
2013 Top 10 MD's & relative Temps

NMI	Period	kW	MW	Maximum Temperature
NDDD00GD21	17-01-2013 11:30	635.20	0.64	32.8
NDDD00GD21	17-01-2013 11:00	630.72	0.63	31.4
NDDD00GD21	07-01-2013 11:00	623.81	0.62	31.2
NDDD00GD21	25-07-2013 10:00	620.99	0.62	2.7
NDDD00GD21	20-08-2013 10:00	614.66	0.61	4.5
NDDD00GD21	15-01-2013 11:00	610.24	0.61	22.7
NDDD00GD21	15-08-2013 10:00	610.05	0.61	8.4
NDDD00GD21	18-01-2013 11:00	609.79	0.61	41.2
NDDD00GD21	24-07-2013 9:30	608.26	0.61	2.9
NDDD00GD21	04-01-2013 11:00	607.49	0.61	33.5

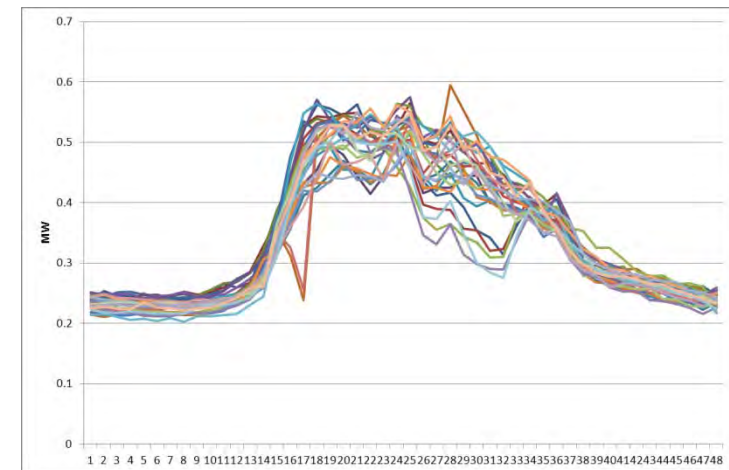
2012 Top 10 MD's & relative Temps

NMI	Period	MW	kW	Maximum Temperature
NDDD00GD21	06-08-2012 13:30	0.59	594.688	10.8
NDDD00GD21	05-07-2012 9:00	0.59	593.28	3.9
NDDD00GD21	19-01-2012 13:00	0.59	592.832	33.8
NDDD00GD21	19-07-2012 11:30	0.59	592.128	8.6
NDDD00GD21	29-11-2012 11:30	0.59	590.528	31.7
NDDD00GD21	13-12-2012 10:30	0.59	590.08	27.6
NDDD00GD21	05-01-2012 12:30	0.59	589.184	28
NDDD00GD21	27-11-2012 11:00	0.59	586.944	28.9
NDDD00GD21	02-07-2012 12:00	0.59	586.56	8.4
NDDD00GD21	29-11-2012 11:00	0.58	584.32	30.7

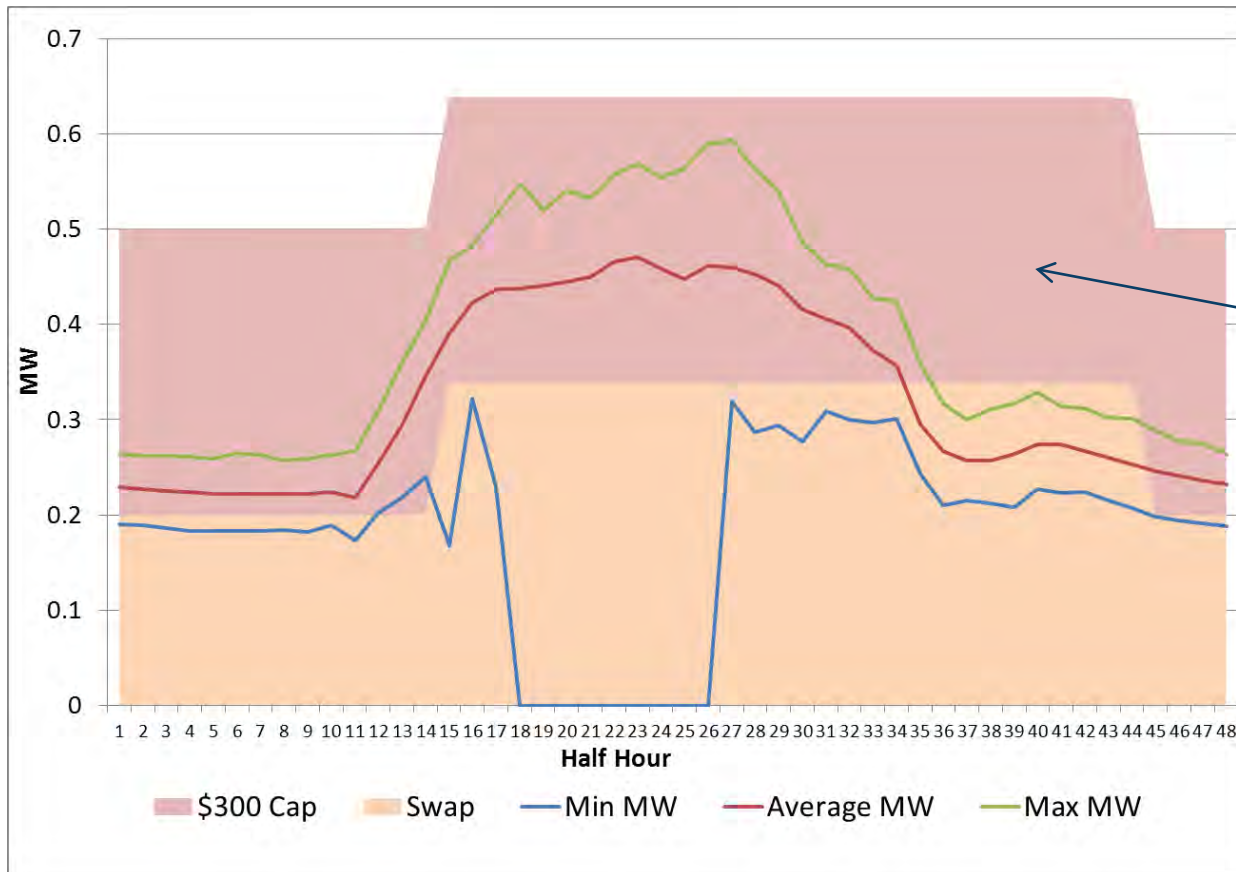
Jan 2013 Daily Profile



Aug 2012 Daily Profile



Customer Hedging Scenario Example



- Apply a reasonable standard hedging scenario
- In this case Swaps and Cap (financial derivatives) are used to hedge against the variable spot price
- Swaps and Caps are useful but can be inefficient in their "block" nature
- This is a base case & perhaps a "traditional" view on how to hedge customers loads.
- The Reality is the modern Retailer/Gentailer Portfolio maybe will be more dynamic. (Generation, Derivatives, Weather products etc.)
- Customers price will reflect somewhere along the portfolio pricing spectrum

Forward Contract Price for Swaps & Caps

SWAPS				OTC with AFMA					
NSW	Peak			Off Peak			Flat		
TERM	Bid	Offer	Sett	Bid	Offer	Sett	Bid	Offer	Sett
BOQ A	\$33.60	\$33.90	\$33.75	\$24.65	\$24.85	\$24.75	\$28.45	\$28.70	\$28.60
Q3 14 A	\$40.75	\$41.15	\$40.95	\$30.10	\$30.40	\$30.25	\$34.90	\$35.20	\$35.05
Q4 14 A	\$40.70	\$41.10	\$40.90	\$26.60	\$26.90	\$26.75	\$32.65	\$33.00	\$32.80
Q1 15 A	\$48.75	\$49.25	\$49.00	\$28.20	\$28.50	\$28.35	\$37.05	\$37.45	\$37.25
Q2 15 A	\$41.70	\$42.10	\$41.90	\$28.40	\$28.70	\$28.55	\$33.95	\$34.30	\$34.15
Q3 15 A	\$43.90	\$44.30	\$44.10	\$29.10	\$29.40	\$29.25	\$35.75	\$36.10	\$35.90
Q4 15 A	\$44.65	\$45.05	\$44.85	\$28.70	\$29.00	\$28.85	\$35.55	\$35.85	\$35.70
Q1 16 A	\$49.20	\$49.70	\$49.45	\$29.50	\$29.80	\$29.65	\$37.75	\$38.15	\$37.95
Q2 16 A	\$42.95	\$43.35	\$43.15	\$28.55	\$28.85	\$28.70	\$34.80	\$35.10	\$34.95
Q3 16 A	\$46.50	\$47.00	\$46.75	\$28.75	\$29.05	\$28.90	\$36.70	\$37.10	\$36.90
Q4 16 A	\$46.55	\$47.05	\$46.80	\$28.70	\$29.00	\$28.85	\$36.20	\$36.60	\$36.40
BCAL A	\$39.45	\$39.85	\$39.65	\$27.65	\$27.95	\$27.80	\$32.80	\$33.15	\$32.95
CAL 15 A	\$44.75	\$45.15	\$44.95	\$28.60	\$28.90	\$28.75	\$35.55	\$35.90	\$35.75
CAL 16 A	\$45.90	\$47.10	\$46.50	\$28.70	\$29.40	\$29.05	\$36.10	\$37.00	\$36.55
BOFY A	\$33.60	\$33.90	\$33.75	\$24.65	\$24.85	\$24.75	\$28.45	\$28.70	\$28.60
FY 14/15 A	\$42.95	\$43.35	\$43.15	\$28.30	\$28.60	\$28.45	\$34.60	\$34.95	\$34.80
FY 15/16 A	\$44.80	\$45.90	\$45.35	\$28.75	\$29.45	\$29.10	\$35.70	\$36.55	\$36.10

CAPS									
NSW	Peak			Off Peak			Flat		
TERM	Bid	Offer	Mid	Bid	Offer	Mid	Bid	Offer	Mid
BOQ	\$0.05	\$0.75	\$0.20	\$0.40	\$0.50	\$0.45	\$0.15	\$0.55	\$0.35
Q3 14	\$0.85	\$1.75	\$1.30	\$0.45	\$0.85	\$0.65	\$0.60	\$1.30	\$0.95
Q4 14	\$2.60	\$3.50	\$3.05	\$0.50	\$0.90	\$0.70	\$1.35	\$2.05	\$1.70
Q1 15	\$6.65	\$7.55	\$7.10	\$1.80	\$2.20	\$2.00	\$3.80	\$4.50	\$4.15
Q2 15	\$1.05	\$3.35	\$2.20	\$0.40	\$1.10	\$0.75	\$0.75	\$1.95	\$1.35
Q3 15	\$3.45	\$4.35	\$3.90	\$0.35	\$0.75	\$0.55	\$1.45	\$2.65	\$2.05
Q4 15	\$3.70	\$4.60	\$4.15	\$0.70	\$1.10	\$0.90	\$1.70	\$2.90	\$2.30
Q1 16	\$7.65	\$8.55	\$8.10	\$1.85	\$2.25	\$2.05	\$3.95	\$5.15	\$4.55
Q2 16	\$2.35	\$3.25	\$2.80	\$0.50	\$0.90	\$0.70	\$1.00	\$2.20	\$1.60
Q3 16	\$4.70	\$5.60	\$5.15	\$1.05	\$1.45	\$1.25	\$2.40	\$3.60	\$3.00
Q4 16	\$6.10	\$7.00	\$6.55	\$1.35	\$1.75	\$1.55	\$3.05	\$4.25	\$3.65
BCAL	\$1.05	\$2.55	\$1.80	\$0.40	\$0.90	\$0.65	\$0.70	\$1.60	\$1.15
CAL 15	\$3.55	\$5.05	\$4.30	\$0.80	\$1.30	\$1.05	\$2.00	\$2.90	\$2.45
CAL 16	\$4.85	\$6.35	\$5.60	\$1.15	\$1.65	\$1.40	\$2.75	\$3.65	\$3.20
BOFY	\$2.70	\$4.00	\$3.35	\$1.65	\$2.05	\$1.85	\$2.15	\$2.85	\$2.50
14/15	\$2.70	\$4.20	\$3.45	\$0.70	\$1.30	\$1.00	\$1.60	\$2.50	\$2.05
15/16	\$3.90	\$5.40	\$4.65	\$0.75	\$1.35	\$1.05	\$2.15	\$3.05	\$2.60

Pool Price Information	2012	2013
Original RPP Avg	\$43.05	\$53.90
>300 Even Counter	2	5
Scaled Base Avg	\$35.75	\$35.75
Sensitivity -25%	\$26.81	\$26.81
Sensitivity +25%	\$44.69	\$44.68

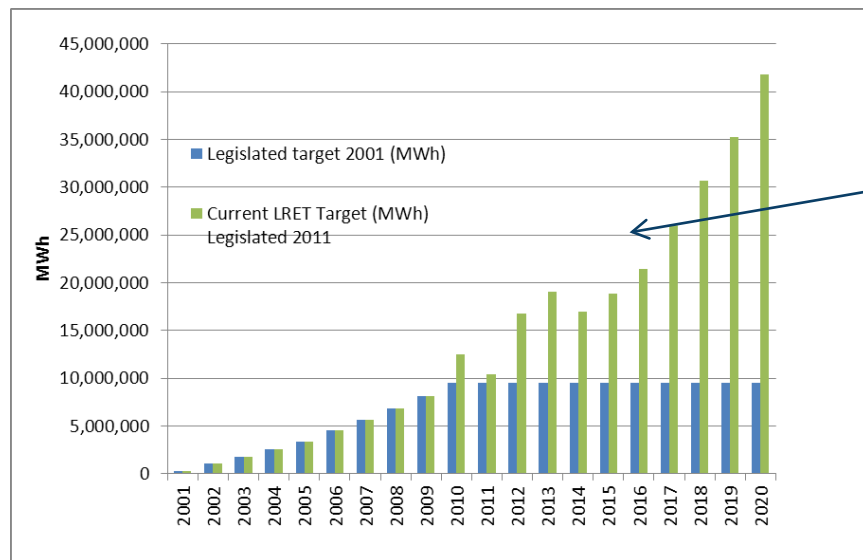
Scale the underlying
2012 & 2013 RPP to
equal the 2015
Forward Contract Price

- Run a pool price scenario against the customers load and hedging assumption to get a distribution of potential costs.
- These modelled "Potential Costs" form the base of the Wholesale costs that would be used to price a customer in 2015

Results	
Cost Distribution	
\$40.79	
\$40.71	
\$40.41	
\$40.37	
\$40.15	
\$40.02	
\$39.77	
\$39.75	
\$39.35	
\$39.32	
\$38.83	
\$38.24	

3. LRET Market

LRET Target and Electricity Trends



Renewable
Target
increasing but

Energy
acquisitions
moderating

LRET Review considerations:

- Appropriateness of the Target given current market dynamics (20% by 2020)
- Impact on Wholesale Price and end prices for consumers
- Investment Certainty
- Support of the Renewable Industry

LGC Certificate Market



- LRET Policy Review is weighing on the market price.

- Spot Market at its lowest point since 2007

- Traded volumes have decreased

- LREC market will be sensitive to the review outcomes.



4. Carbon Repeal

Current Market Issues – Carbon



- The wholesale market has priced that Carbon will be repealed ~ Mid July 2014
- Retailers and Generators are presently grappling with and prices and existing arrangements sold to customers.
- Some Wholesale and/or Retail agreements maybe clear cut....others not so much !
- Commercial & Industrial Customers vs Residential Customer – how does the repeal affect each segment
- Contract dependent –AFMA v Futures

5. More about Progressive Green

AIE Seminar – Progressive Green Product Optionality

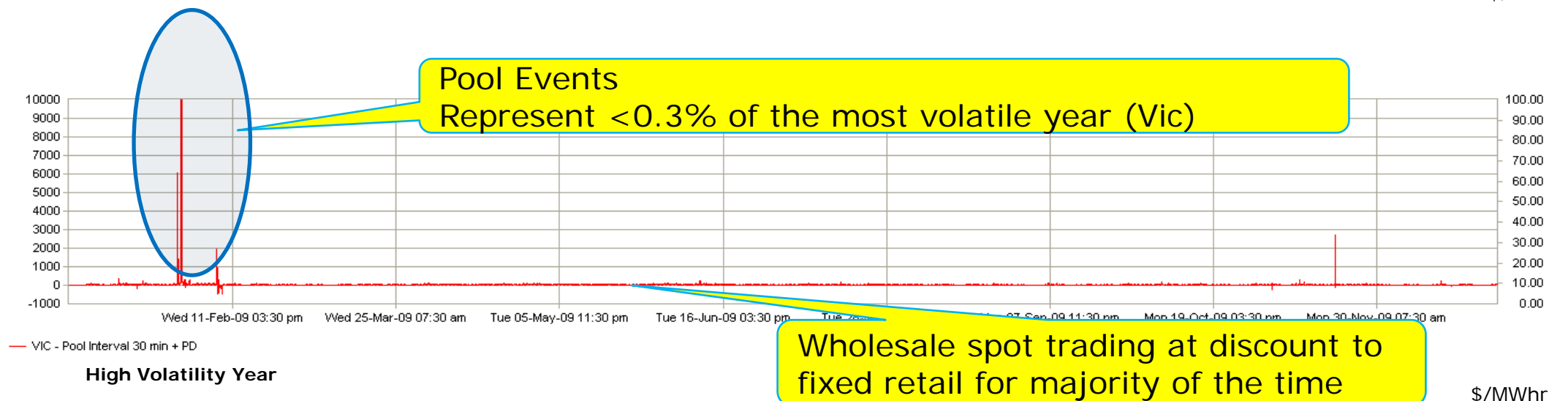
- Progressive Green can provide regular Fixed and Off Peak Products
- We can also tailor Wholesale Structured Products that can unlock additional value for customers.
- Historically, the Pool Price generally (but not always) under-performs the Wholesale contract price that was offered for the same period.
- Key is to access the under-performing or low spot prices while managing the higher pool prices (either volatility or high underlying averages)
- For the right customer this can be done by a combination of load management and/or structured hedges.

Wholesale Spot Electricity Market

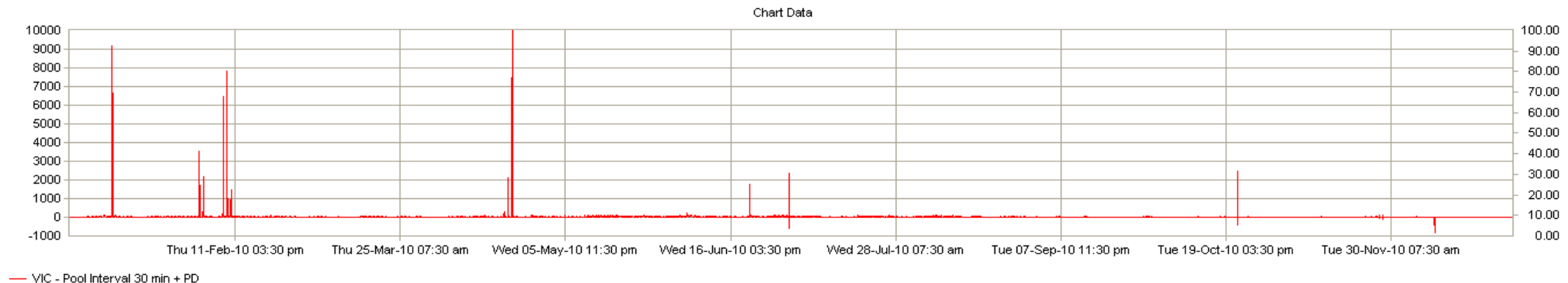
Strategy:

- Purchase electricity at wholesale for majority of the time, while avoiding very occasional high price events.
- Manage High Average Pool prices with tailored Products

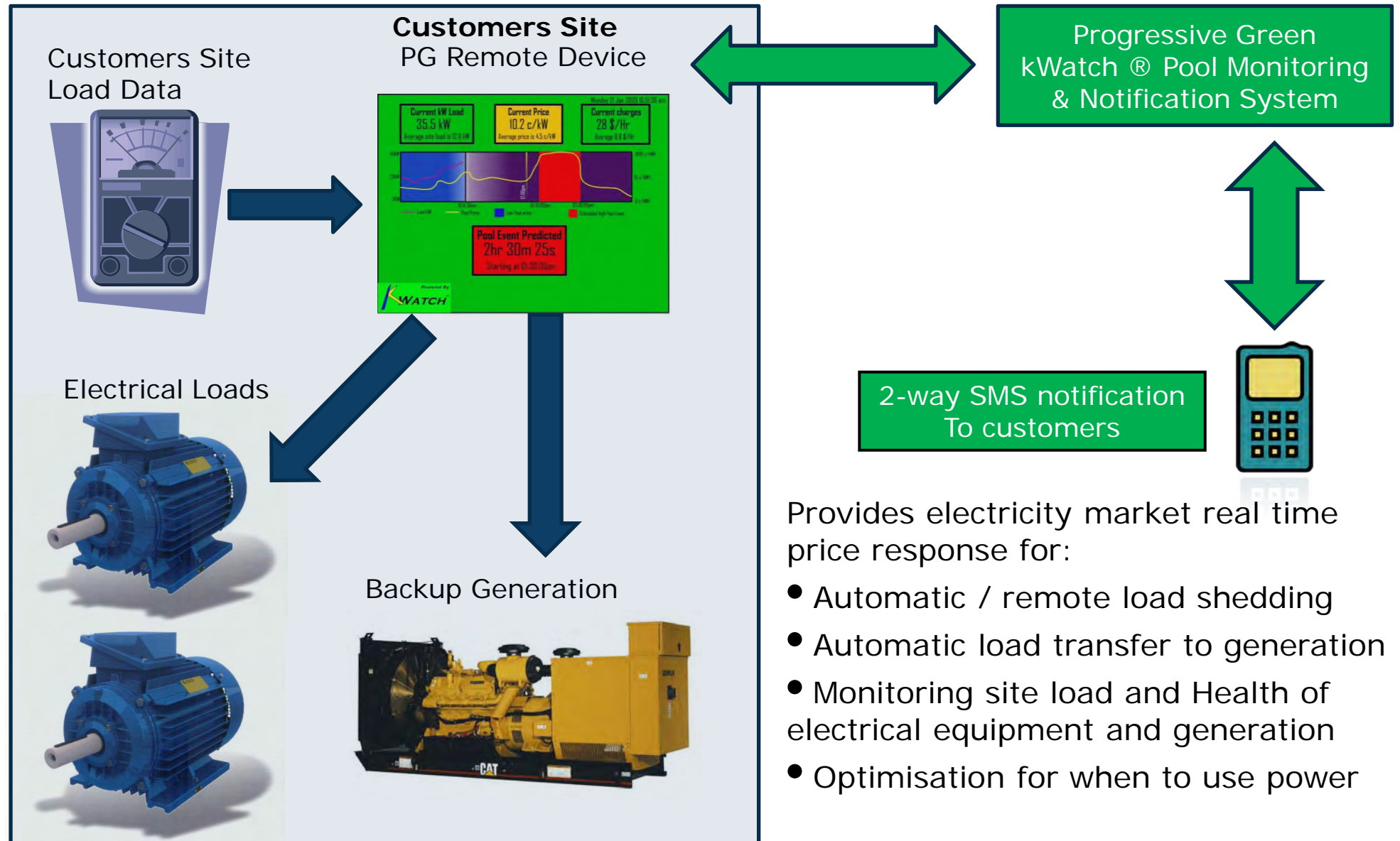
Low Volatility Year



High Volatility Year



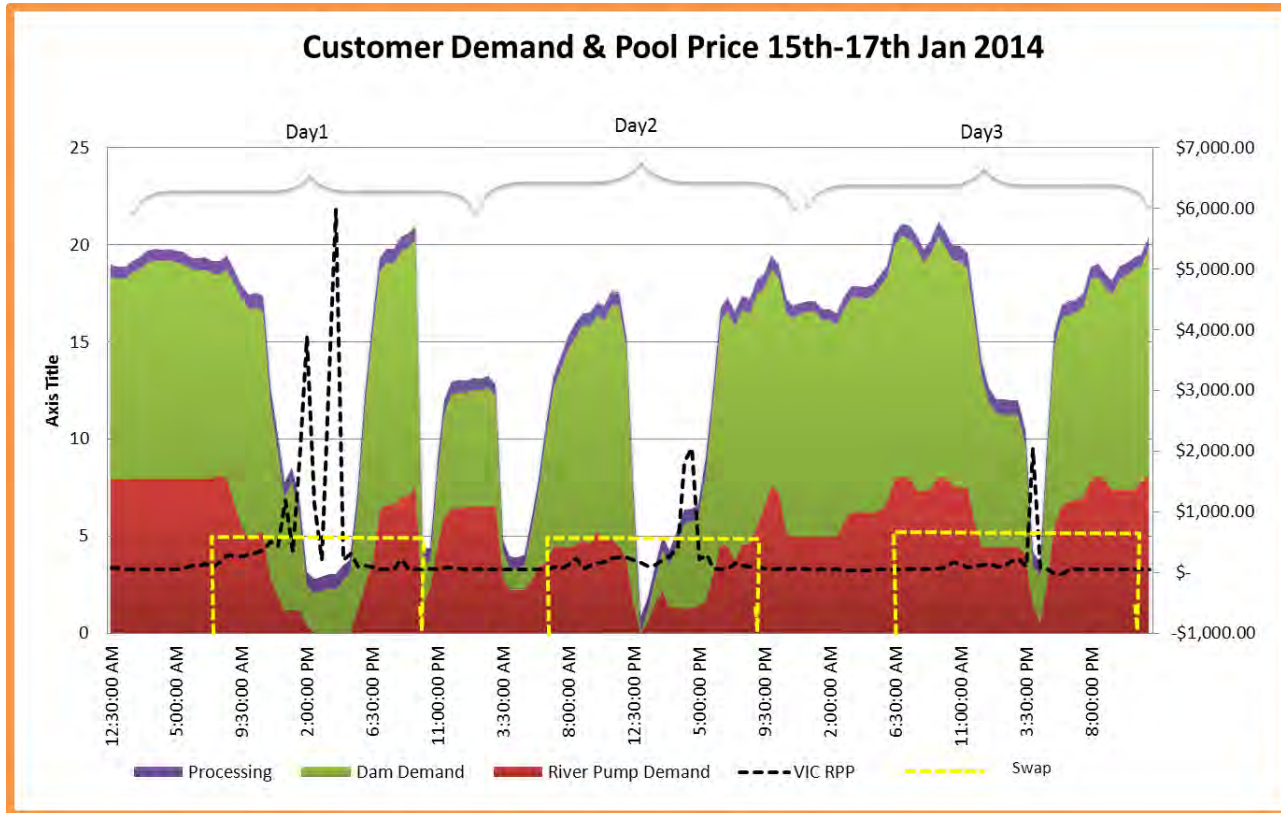
Integrated Remote Monitoring & Notification Systems



Provides electricity market real time price response for:

- Automatic / remote load shedding
- Automatic load transfer to generation
- Monitoring site load and Health of electrical equipment and generation
- Optimisation for when to use power

Current Progressive Green Customer



This is an example of current Progressive Green customer on a managed pool product.

Customer manages pool price volatility with a combination of curtailment and hedge contracts.

Customer benefits from low pool prices relative to contract price offering.

In the event of high underlying pool prices (but low volatility) other solutions can also be constructed to manage those spot price outcomes.

Its about managed options for customers



Thank You

Questions?

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