Dispatchable Demand: Options

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Agenda

- Background
- Problem definition
- Options
- Evaluation

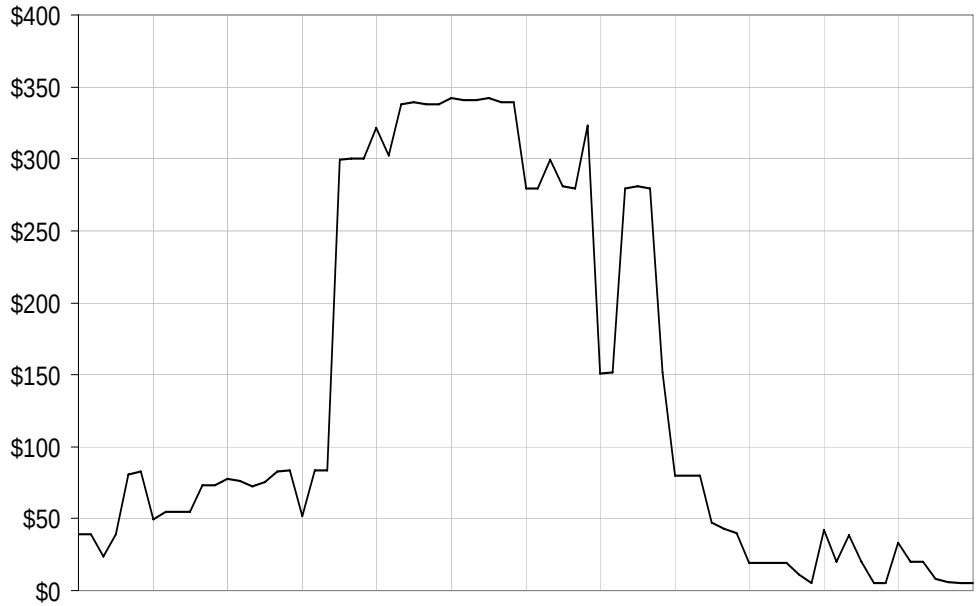
Demand response

- Characteristics
  - Huge variety
  - No “one size fits all”
- Benefits
  - Responding to tight market conditions
  - Defer investment
  - Counterweight to supplier market power

Existing arrangements

- Direct purchasers
  - Bidding and schedules
  - Response to price forecasts/indications
  - Affects final price

5-minute Prices



- Retail customers
  - Retailer has incentive to “package” solution to customer categories
  - Cost versus benefit trade-off

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Problems

- Uncertainty of response
  - Reacting unnecessarily
  - Missing an opportunity
- Pricing
  - Neglects useful information
- Retail relationships not unlocking resource

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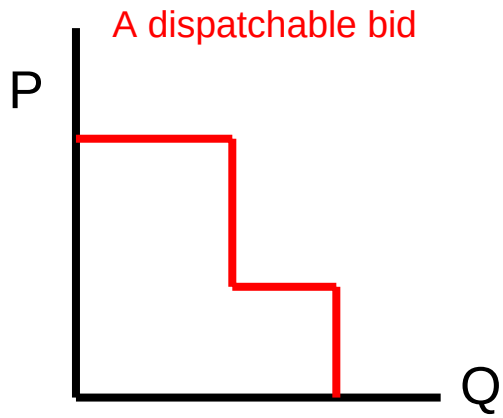
Four options

1. Dispatch load
2. Dispatch load differences
3. Dispatch load differences and side payments
4. Separate framework

*All options would provide for **optional** demand dispatch, i.e. not compulsory*

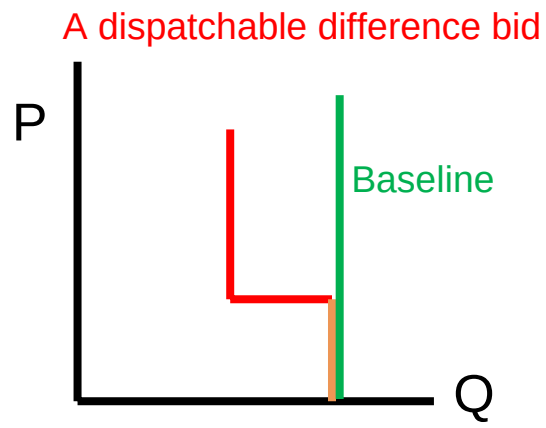
1. Dispatch load



- Bids stay the same
- Lots of dispatch instructions
- Dispatchable bids used in RTD and final pricing
- Final pricing plays full role

2. Dispatch load differences

- Bid “demand reductions”
- Dispatched only when needed
- Need a “baseline”
- Dispatchable bids used in RTD and final pricing



3. Dispatch load differences & side payments

Same as option 2 and side payments

- Dispatch reductions from baseline
- Purchasers or aggregators paid
  - How much?
- Are side payments efficient?
  - Funded by uplift charge
  - Total demand response incentive “too high”
  - Interferes with retail relationship

4. Separate framework

- Move away from existing framework
- Contractual approach
  - Tailored to individual circumstances
  - e.g. Grid Support Contracts, reserve energy buy-backs
  - Not integrated with final pricing
- Baseline issues remain?
- Are side payments efficient?

Options Summary

	Total v differences	Role of final price	Use existing framework?
1. Dispatch load	Dispatch total MW	Single energy only price signal	Use market framework
2. Dispatch load differences	Dispatch differences from some baseline		
3. Dispatch load differences and side payments		Side payments to "improve" that signal	
4. Separate framework			Contractual approach

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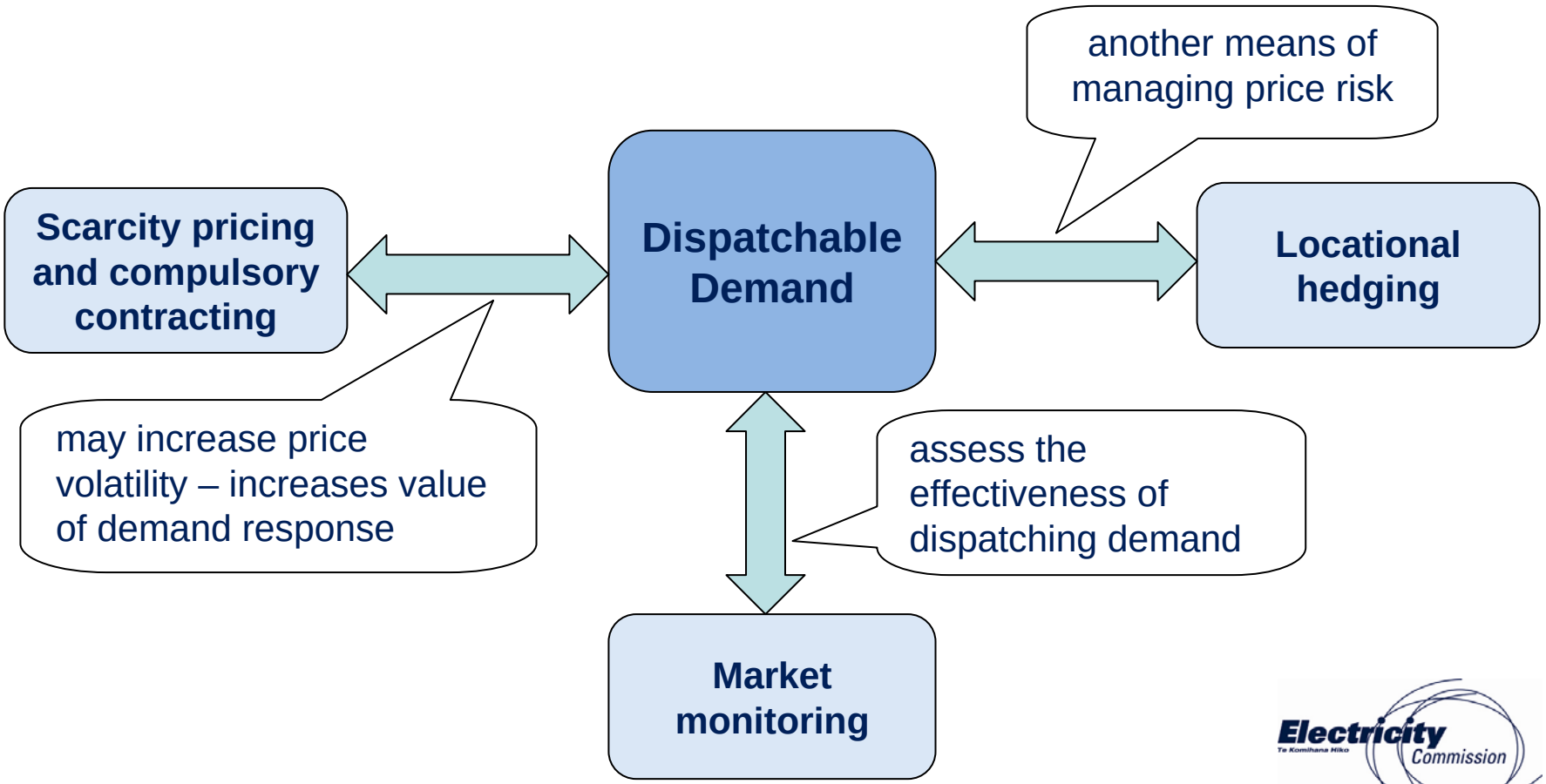
Evaluation of options

Options	Pros	Cons
1. Dispatch load	Easy to implement	Participation ***X***
2. Dispatch load differences	Participation **?**	Participation **?** Baseline
3. Dispatch load differences and side payments	Participation ✓	Inefficiency / higher prices? Baseline Transaction costs
4. Separate framework	Participation ✓✓	Inefficiency / higher prices? Baseline Transaction costs

Linkages with other MDP projects



Other ways to address the problems

- Improve pricing, for example:
  - Better demand forecasting using DSBF frameworks
  - Risk information (e.g. wind)
  - Ex-ante pricing
- Innovation
  - Information and control systems

Questions

- Which options warrant further consideration?
- Would you participate?
- Are there different high level options?
- Priority for this work?