

# A vision on the future Power market



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Enschede

# Agenda

- Where we come from
- Why the past isn't working anymore
- Changing direction

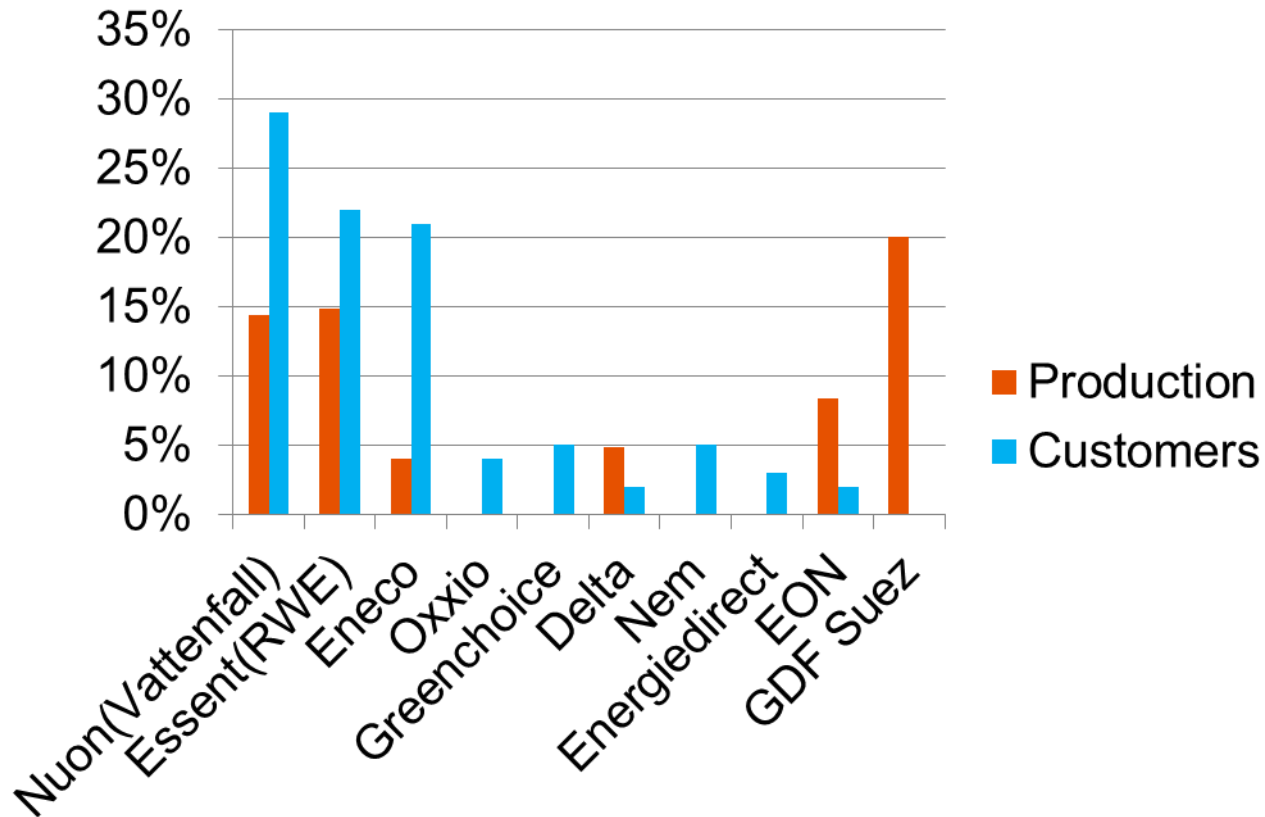


# The first public power company



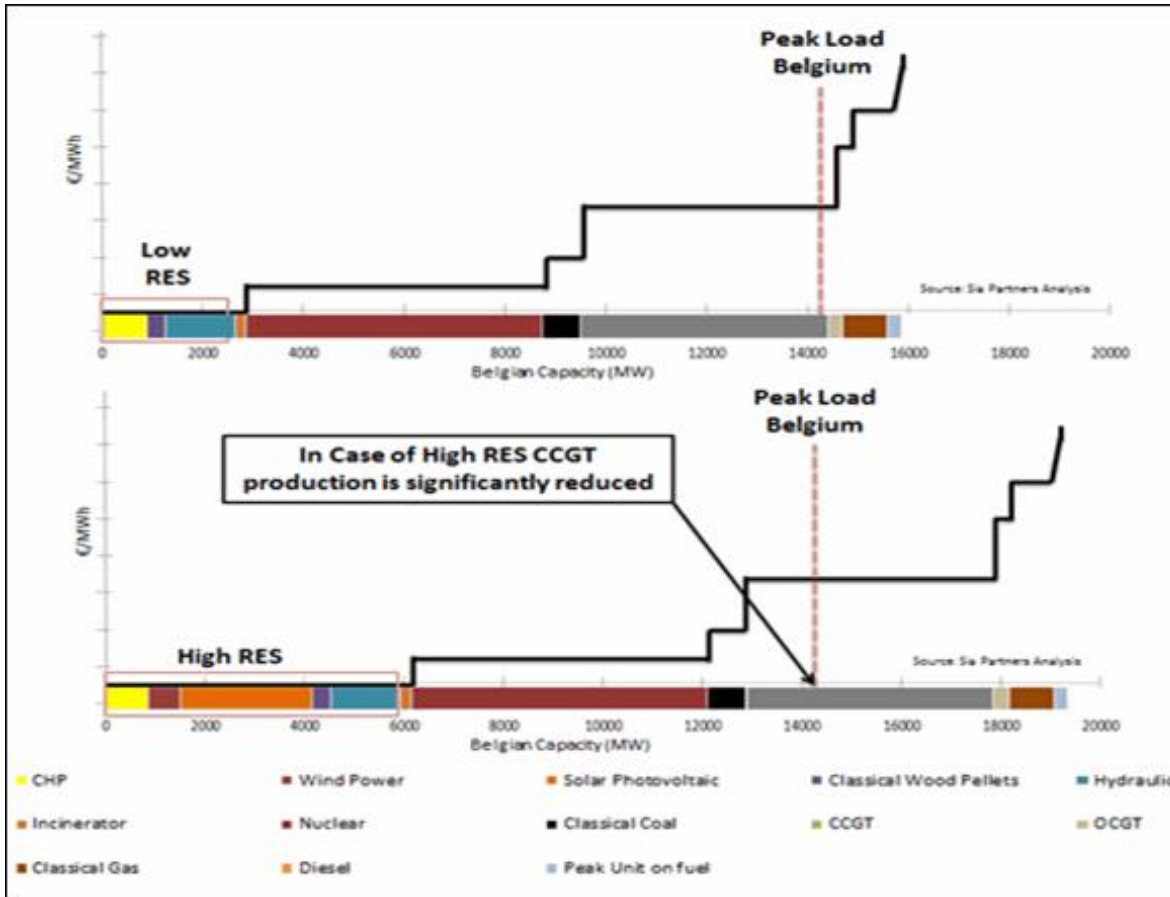
***Powerplant at Kinderdijk (1886)  
served around 350 connections (each  
lightbulb is counted as a connection). Flat fee  
of 12-15 guilders a year for each lightbulb.***

# Present Power market (NL)



(Source: ACM)

# Merit Order



(Source: Sia partners)

Where we come from

## 2 Cheaper for some

Germany's wholesale electricity price  
 € per MWh



Source: Bloomberg

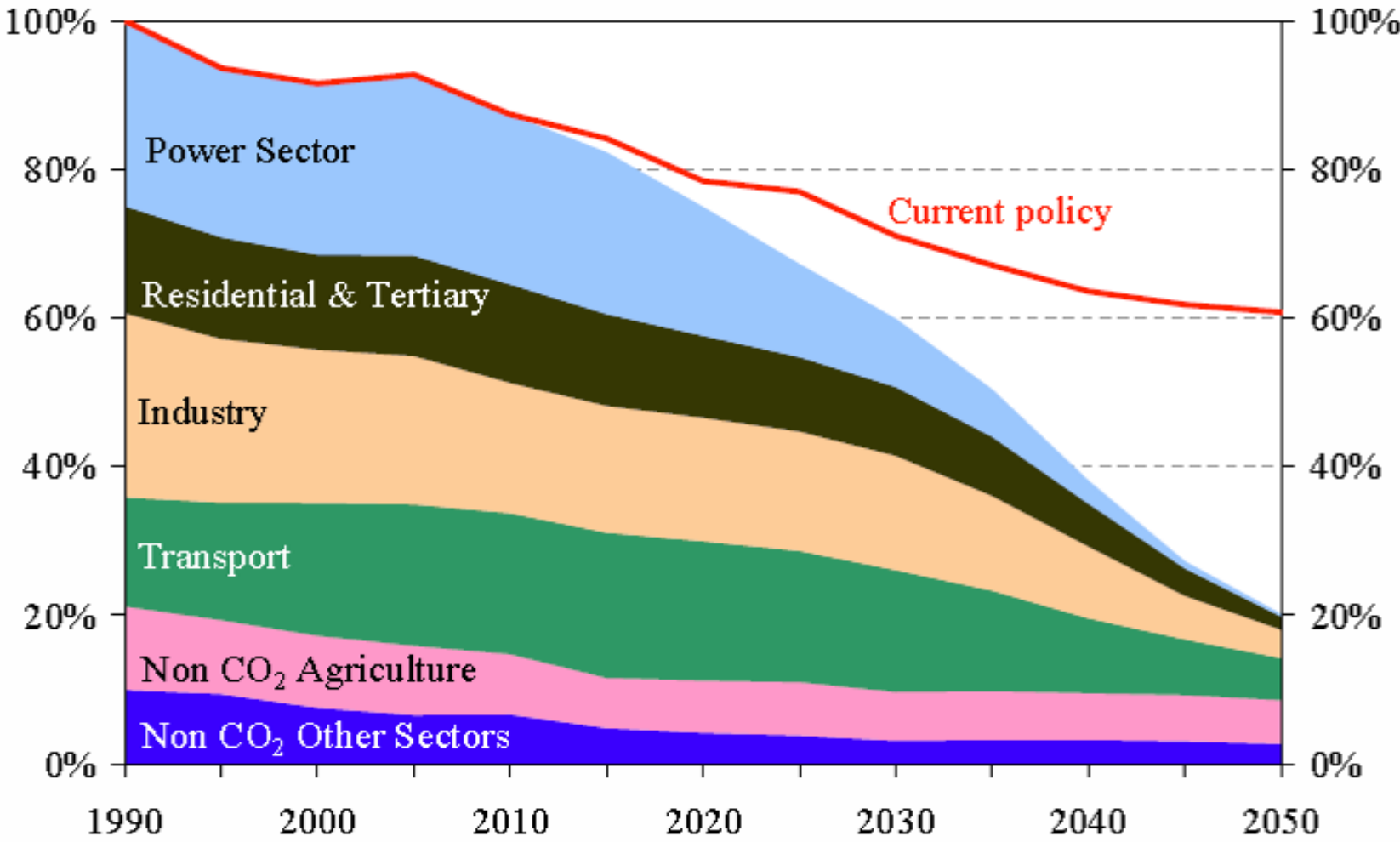
## 1 Dim and dimmer

MSCI European utilities share price, \$ terms  
 Jan 2005=100



Source: Thomson Reuters

# EU roadmap on CO2



•Dutch Power sector emission have actually increased since by 15% since 1990 (source: CBS)

# Customers have grown up

- In the Netherlands there are more than 300 initiatives of communities investing in solar, numbers still growing
- Researchers expect consumers to invest more in production power than energy companies in coming years



**House owner:**

*“We get a higher interest on investment in solar than on our bank saving account”*

Why the past isn't working anymore

# The preferred direction of change seems

- ... a reduction of CO2 emissions

Increase zero emission generation in the grid

- ... a cheaper energystem

Reduce the cost of infrastructure investments & operation

- ... but at least as reliable as now

Work together and don't try to do it alone

- ... more customer oriented

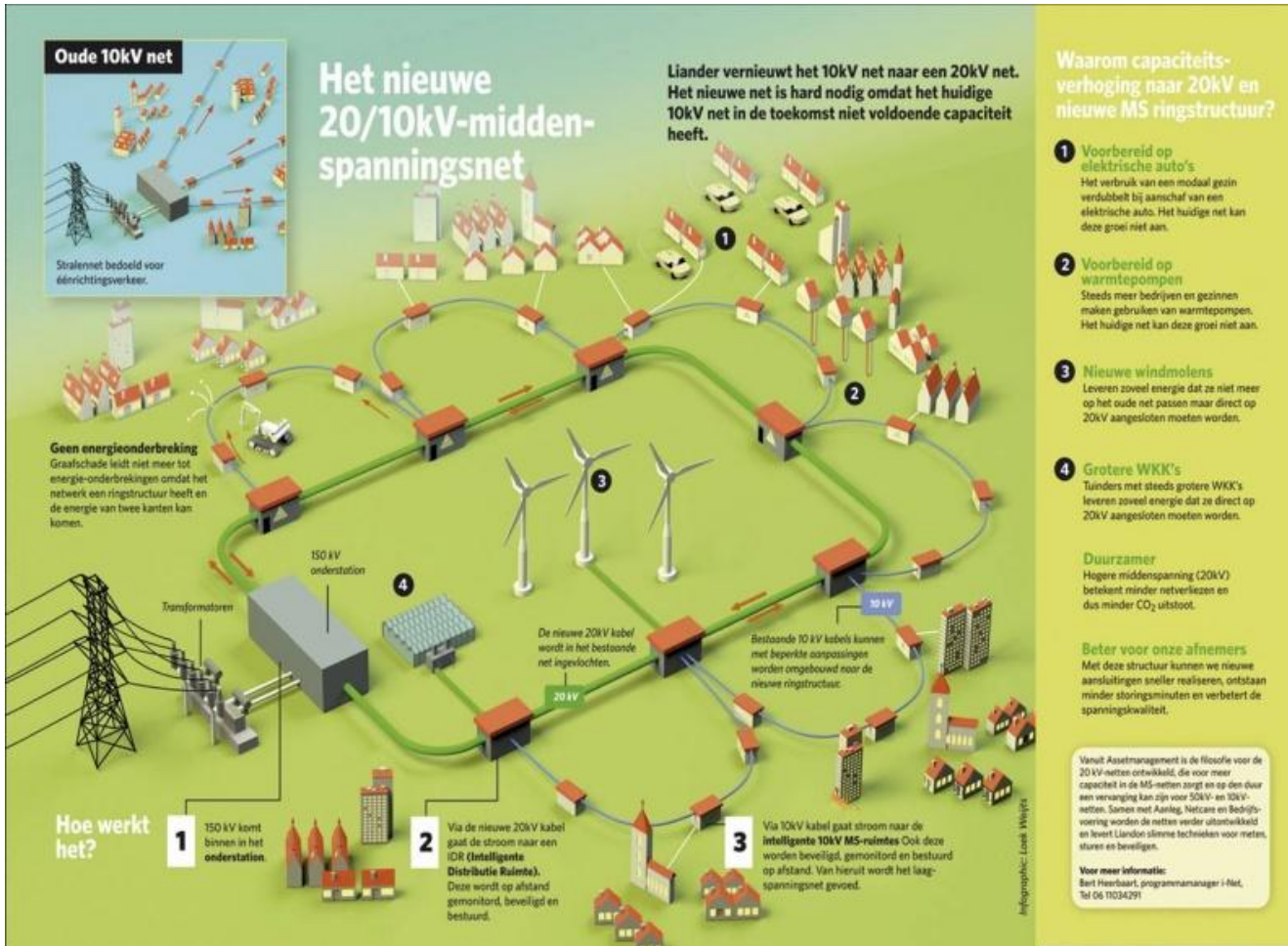
Don't force the customer but seduce him

- ... but with no hassle or inconvenience

Make it as easy as possible, but let the customer keep control



# I-networks



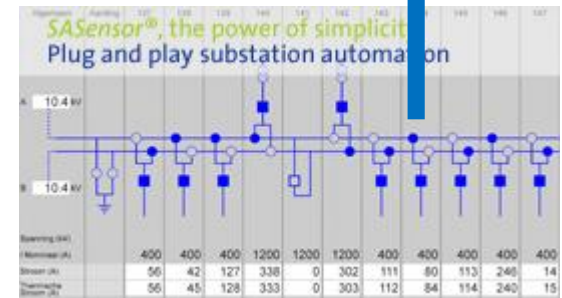
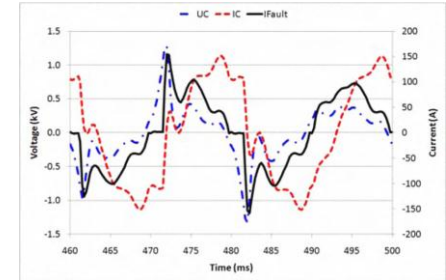
- Increase reliability
- Reduce inconvenience due to roadwork
- Prepare for local generation
- Reduce investment cost

Changing direction

# Reduce infrastructure cost (Sasensor)



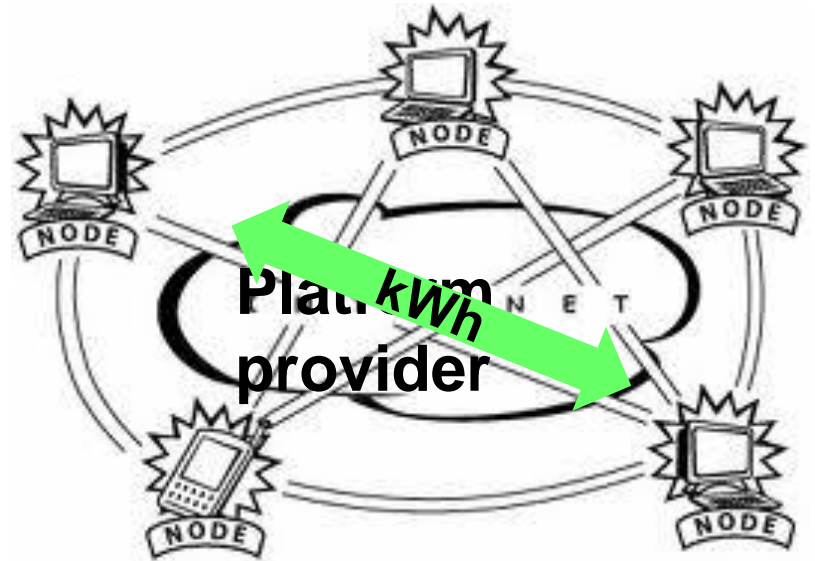
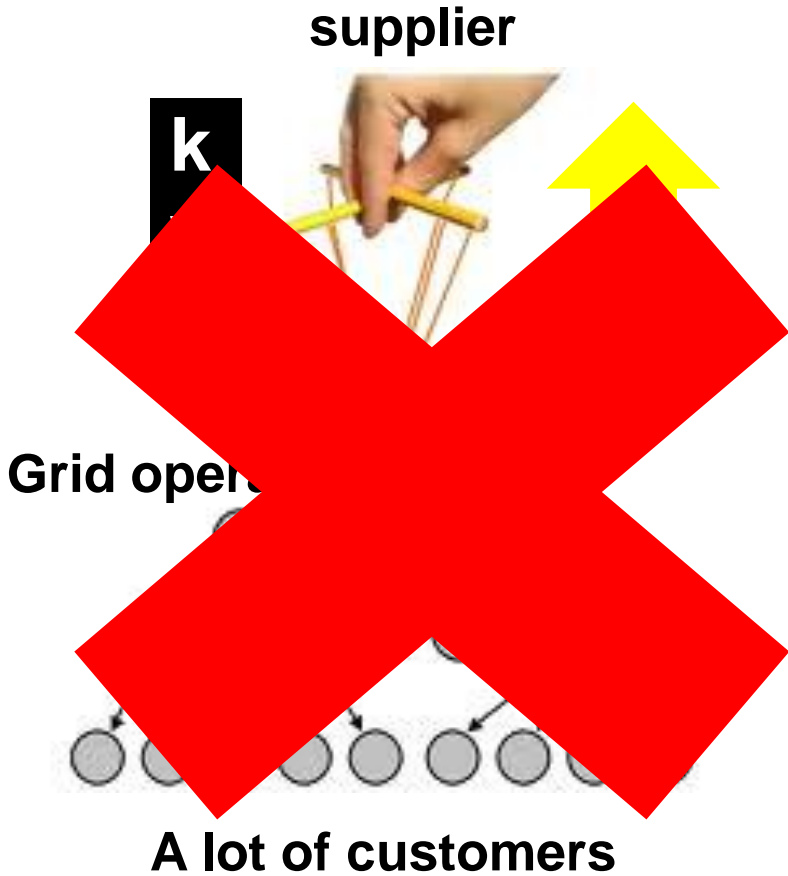
- Lower investment
- Easier to maintain
- Future proof
- Improved reliability



<http://www.rtl.nl/xl/#/u/e0726f3d-0366-45f>

Changing direction

# What society wants



# Help communities help themselves

- From smart grids to smart energy
- Focus on customer, not technology
  - Limit inconvenience
  - Empower the customer
  - Offer insight and feedback
- Use locally available energy sources
  - Solar collector
  - Waste to biofuel
  - Combine heating and cooling needs
- Try out new services and business models

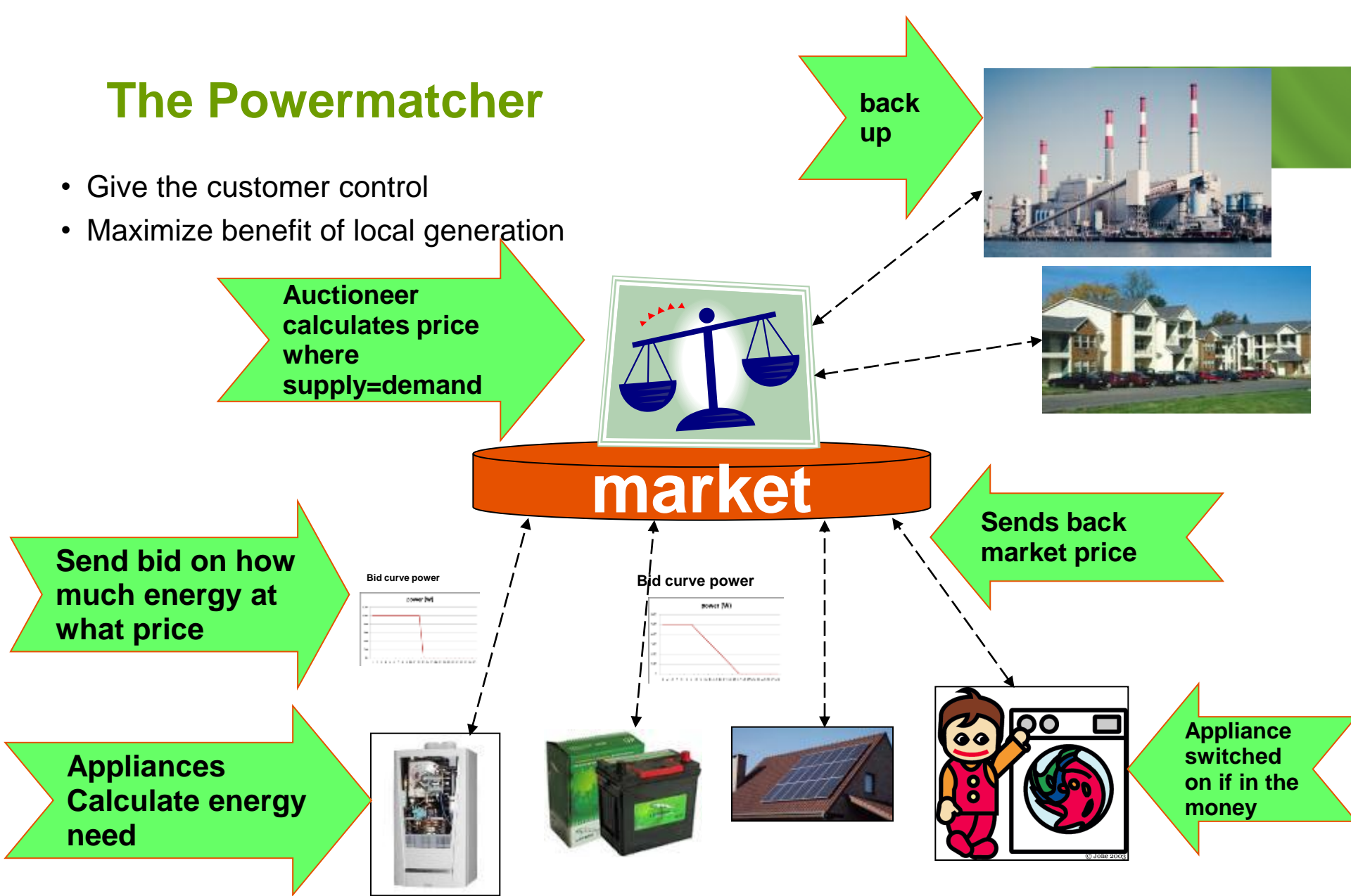


am **smart** erdam  
**city**

<http://amsterdamsmartcity.com/>

# The Powermatcher

- Give the customer control
- Maximize benefit of local generation



Changing direction

[www.flexiblepower.org](http://www.flexiblepower.org)  
[www.powermatchingcity.nl](http://www.powermatchingcity.nl)

# The future is build together



alliander



FLEXIBLEPOWER  
ALLIANCE NETWORK

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[www.amsterdamsmartcity.com](http://www.amsterdamsmartcity.com)

[www.flexiblepower.org](http://www.flexiblepower.org)

[www.alliander.nl](http://www.alliander.nl)

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