




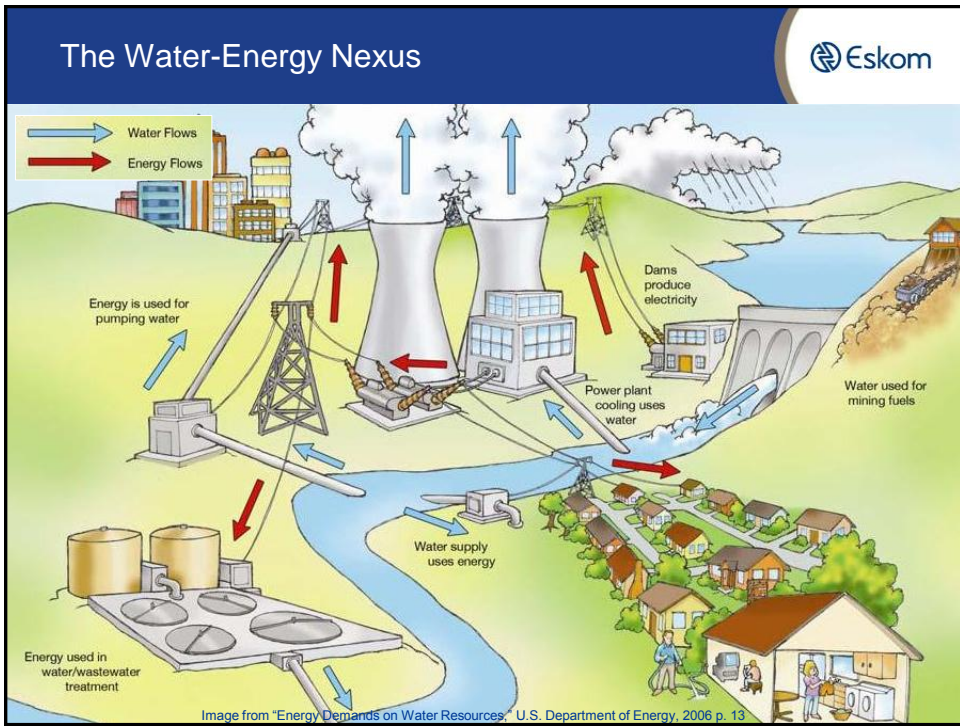
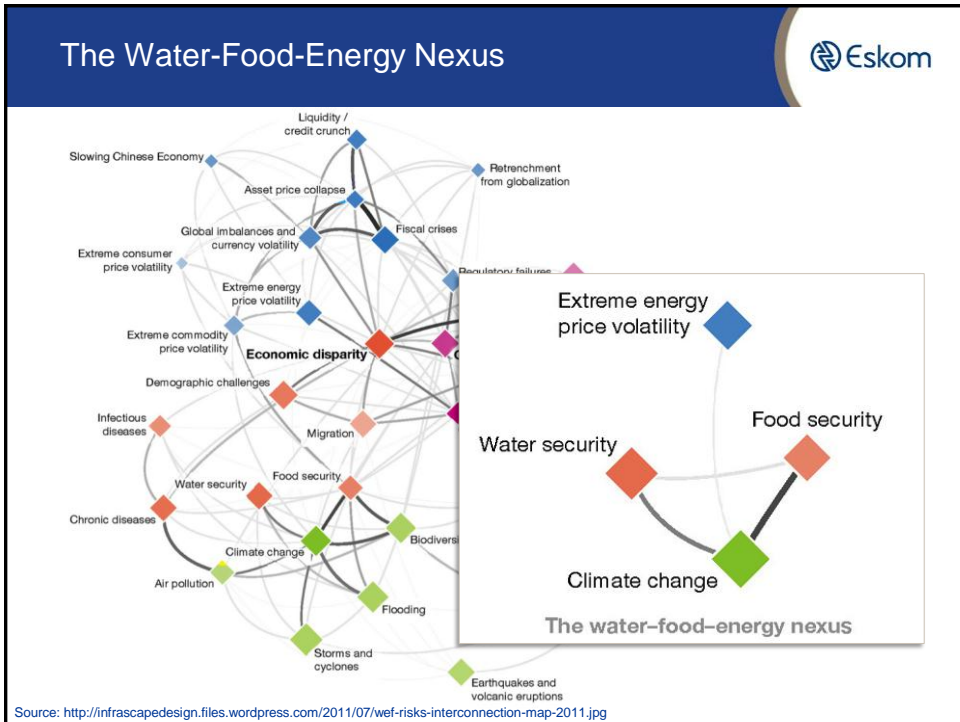
Presentation from Eskom for Best Business Practice Forum

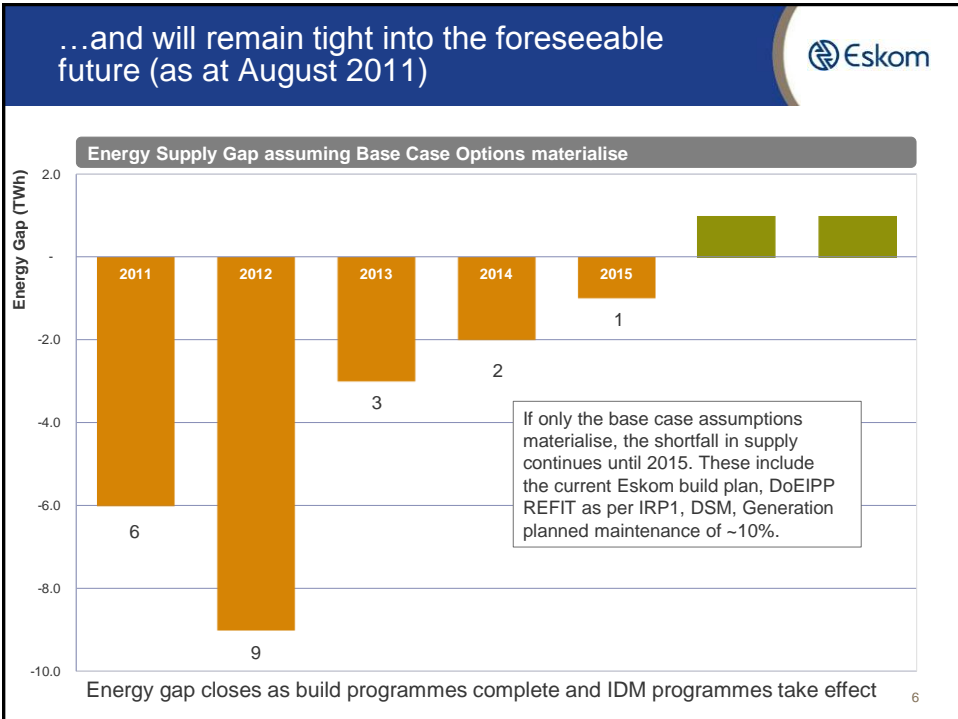
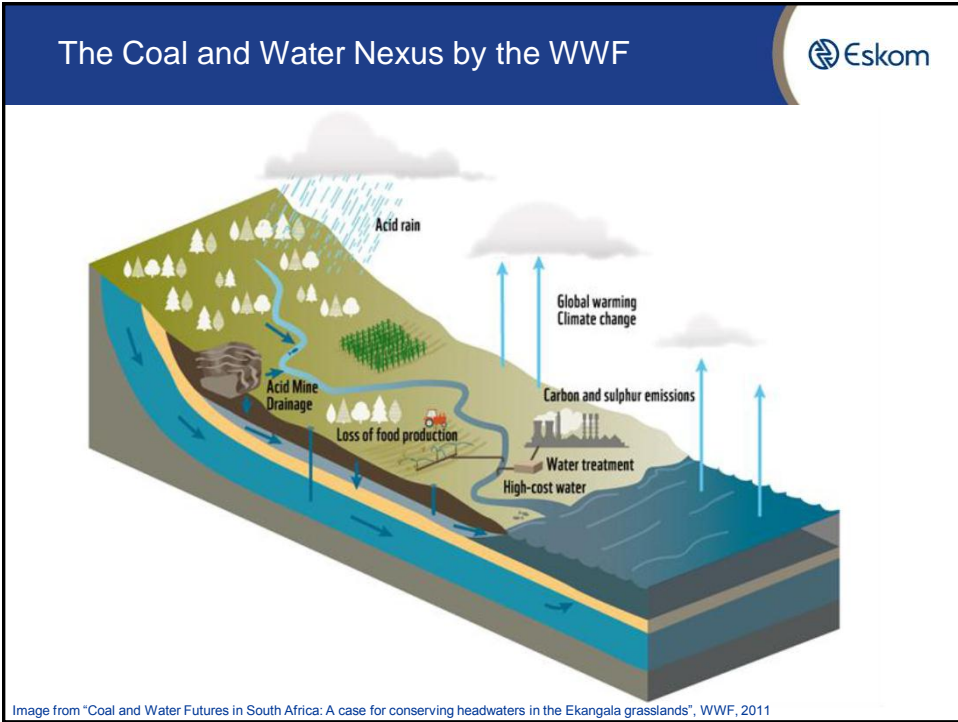
8 May 2012

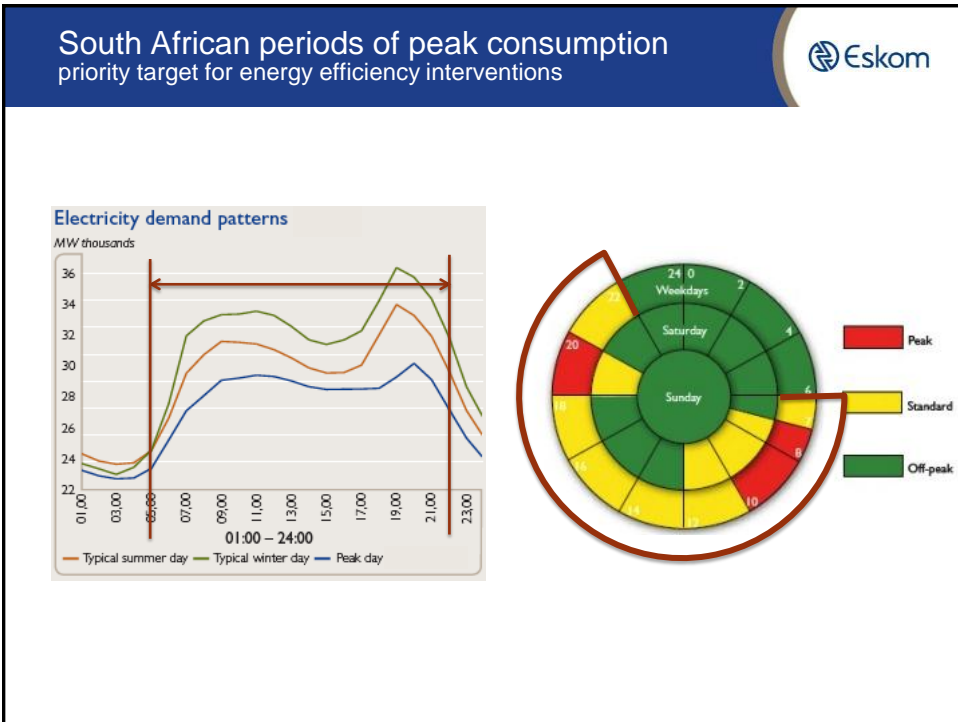
The Interconnectedness of Things




Source: <http://infrascapedesign.files.wordpress.com/2011/07/wef-risks-interconnection-map-2011.jpg>







ESCo Model



Demand-based payments for verified savings.

Process Optimisation, Lighting, Heat Pumps, HVAC, etc.

Individual Projects with unique requirements

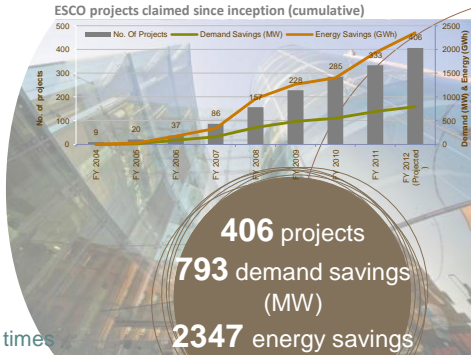
Size: >1MW
Market focus: Industrial

Although demand-based, payment equates to
50-70c/kWh

Issues with ESCo model:

- 1) Individual project approvals and long lead times
- 2) Not applicable to "mass market"
- 3) Inconsistent evaluation criteria
- 4) Cumbersome governance processes
- 5) Complex and onerous contracts

ESCO projects claimed since inception (cumulative)




406 projects

793 demand savings (MW)

2347 energy savings (GWh)

Standard Offer



Energy Efficiency payments at a fixed rate for a fixed period (16 hours)

Lighting, LEDs, Hot Water Systems, Solar, Industrial Process Optimisation

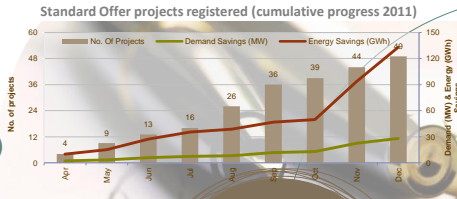
Replace inefficient technologies with a pre-approved suite of energy efficient products

Size: **50kW-5MW (Mon-Fri 6:00-22:00)**
Market focus: **Industrial / Commercial**

Standard rate per kWh per technology
42 – 70 c/kWh (Peak Hours)

Sustainability ensured by procuring energy savings over a 3 year period (70% on completion and 10% pa thereafter)


Standard Offer projects registered (cumulative progress 2011)



| Month | No. of Projects | Demand Savings (MW) | Energy Savings (GWh) |
|-------|-----------------|---------------------|----------------------|
| Apr | 4 | 0.5 | 1.0 |
| May | 9 | 1.0 | 2.0 |
| Jun | 13 | 1.5 | 3.0 |
| Jul | 16 | 2.0 | 4.0 |
| Aug | 26 | 2.5 | 5.0 |
| Sep | 36 | 3.0 | 6.0 |
| Oct | 39 | 3.5 | 7.0 |
| Nov | 44 | 4.0 | 8.0 |
| Dec | 59 | 4.5 | 9.0 |

61 projects
31.4 demand savings (MW)
148.1 energy savings (GWh)

Standard Product



Pre-approved rebates for deemed energy savings (24/7) achieved through specified technologies – efficient replacements

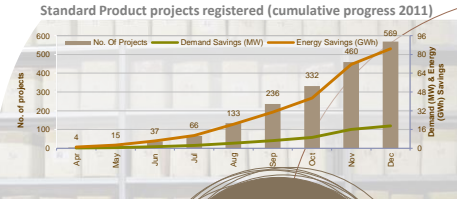
Lighting, Shower heads, Industrial heat pumps

Small to medium projects

Size: **<100kW savings**
Market focus: **Commercial**

Standard value per rebated item, scaled to 85% of SOP
Rebate capped at R750 000


Standard Product projects registered (cumulative progress 2011)



| Month | No. of Projects | Demand Savings (MW) | Energy Savings (GWh) |
|-------|-----------------|---------------------|----------------------|
| Apr | 4 | 0.1 | 0.2 |
| May | 15 | 0.2 | 0.4 |
| Jun | 37 | 0.3 | 0.6 |
| Jul | 66 | 0.4 | 0.8 |
| Aug | 133 | 0.5 | 1.0 |
| Sep | 236 | 0.6 | 1.2 |
| Oct | 332 | 0.7 | 1.4 |
| Nov | 460 | 0.8 | 1.6 |
| Dec | 569 | 0.9 | 1.8 |

572 projects
19.7 demand savings (MW)
86.9 energy savings (GWh)

Demand Response



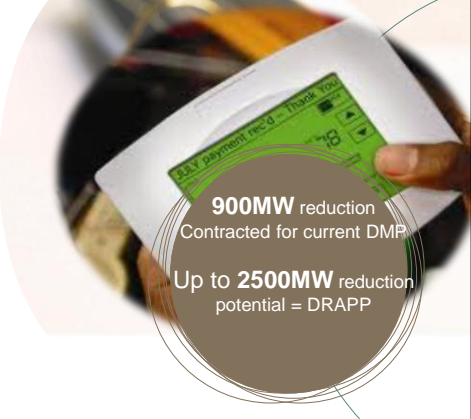
Payment of a fixed rate for load reduction at fixed predetermined times.

Demand Market Participation (DMP) programme; Demand Response Aggregated Pilot (DRAPP) programme

DMP
Size: Customers with 20-80MW demand reduction potential
Market focus: Industrial

DRAPP
Size: Customers with <10MW demand reduction potential
Market focus: Small industrial and commercial

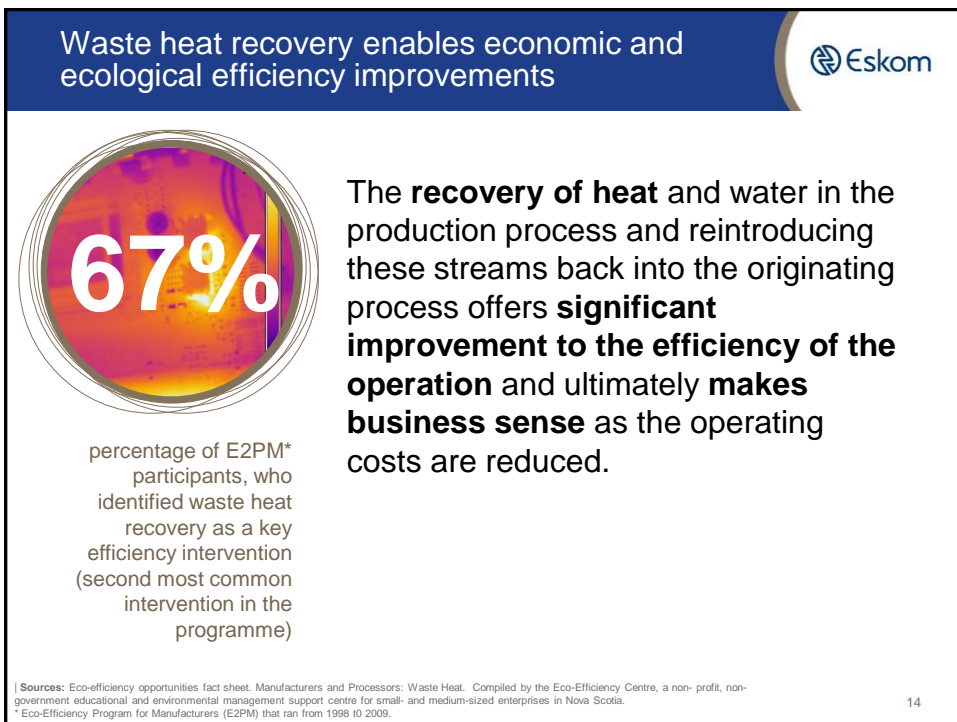
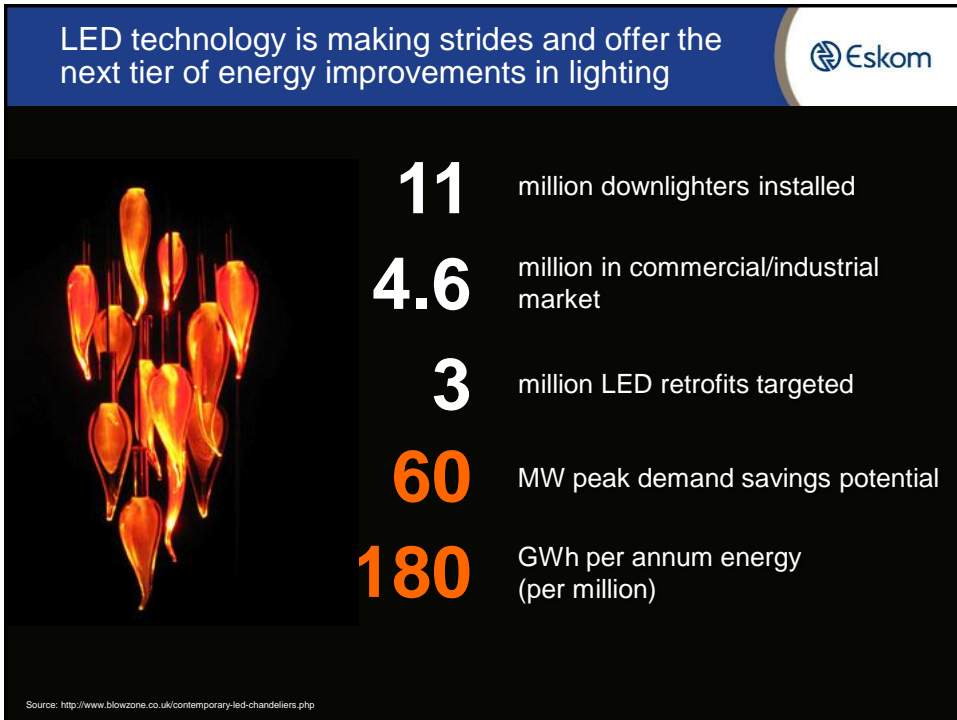
Multiple fixed rate per MWh
R800/MWh – R1000/MWh.



FUTURE

Emerging and Future Focus





Energy efficiency and renewable energy are key components of **zero** energy facilities



Formal commitments are being made globally to pursue **zero energy** goals.

This requires a combination of energy efficiency and **small-scale renewable energy** interventions.

Accordingly several initiatives, including India's Ministry of Power and Canada's Clean Air Partnership, have broadened their **definitions of DSM** to incorporate **green/renewable energy**.

Eskom IDM, in consultation with NERSA, is hoping to follow suit.