

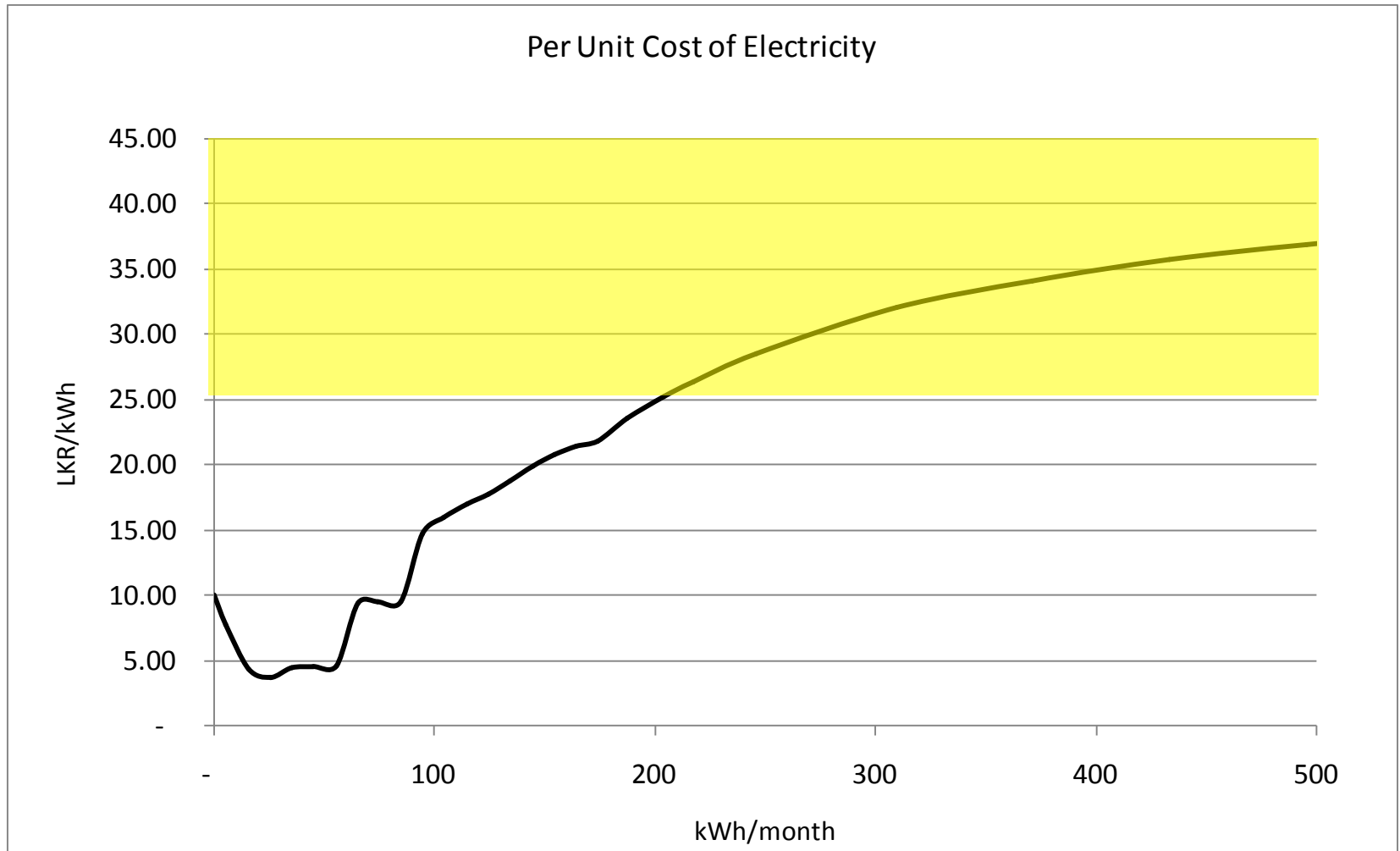
Different Market Development Approaches for a Market with Pronounced Tariff Differentials in Solar PV Rooftop Industry in Sri Lanka

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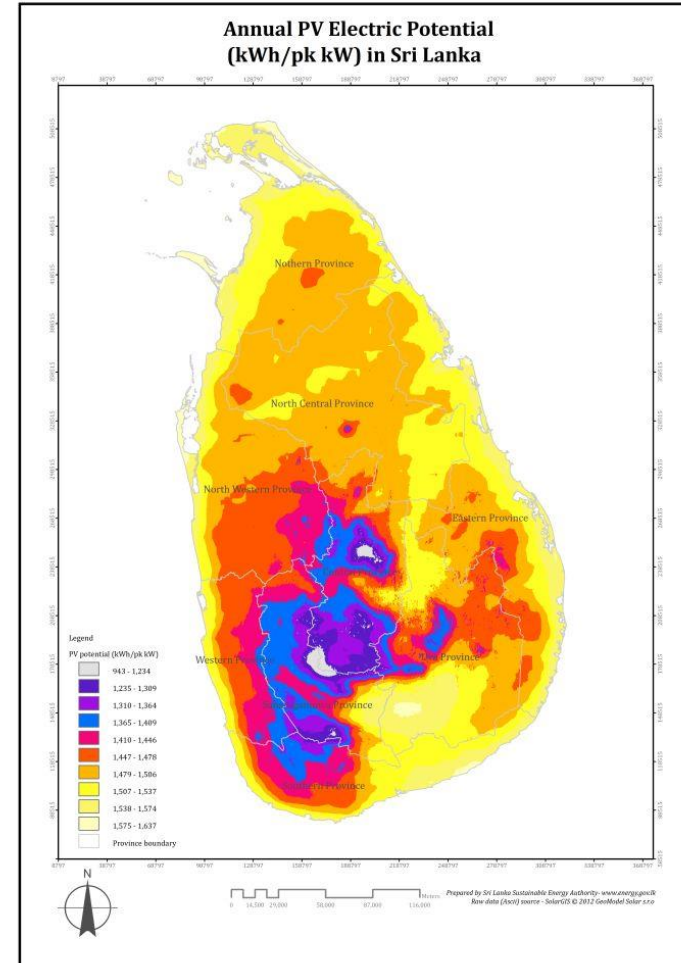
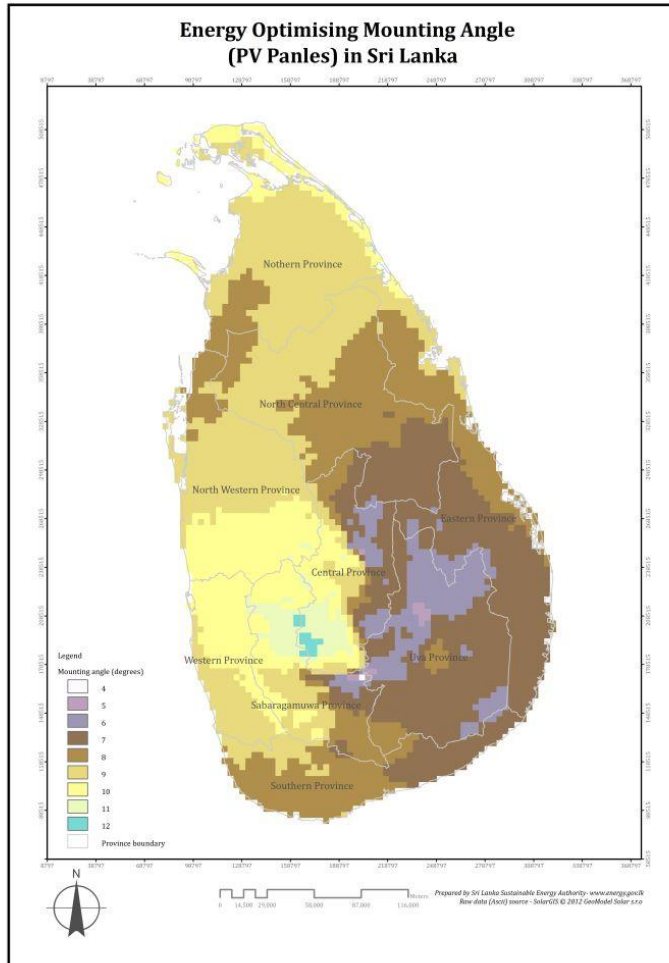
Sri Lanka Sustainable Energy Authority



Unit cost of electricity – a unique story

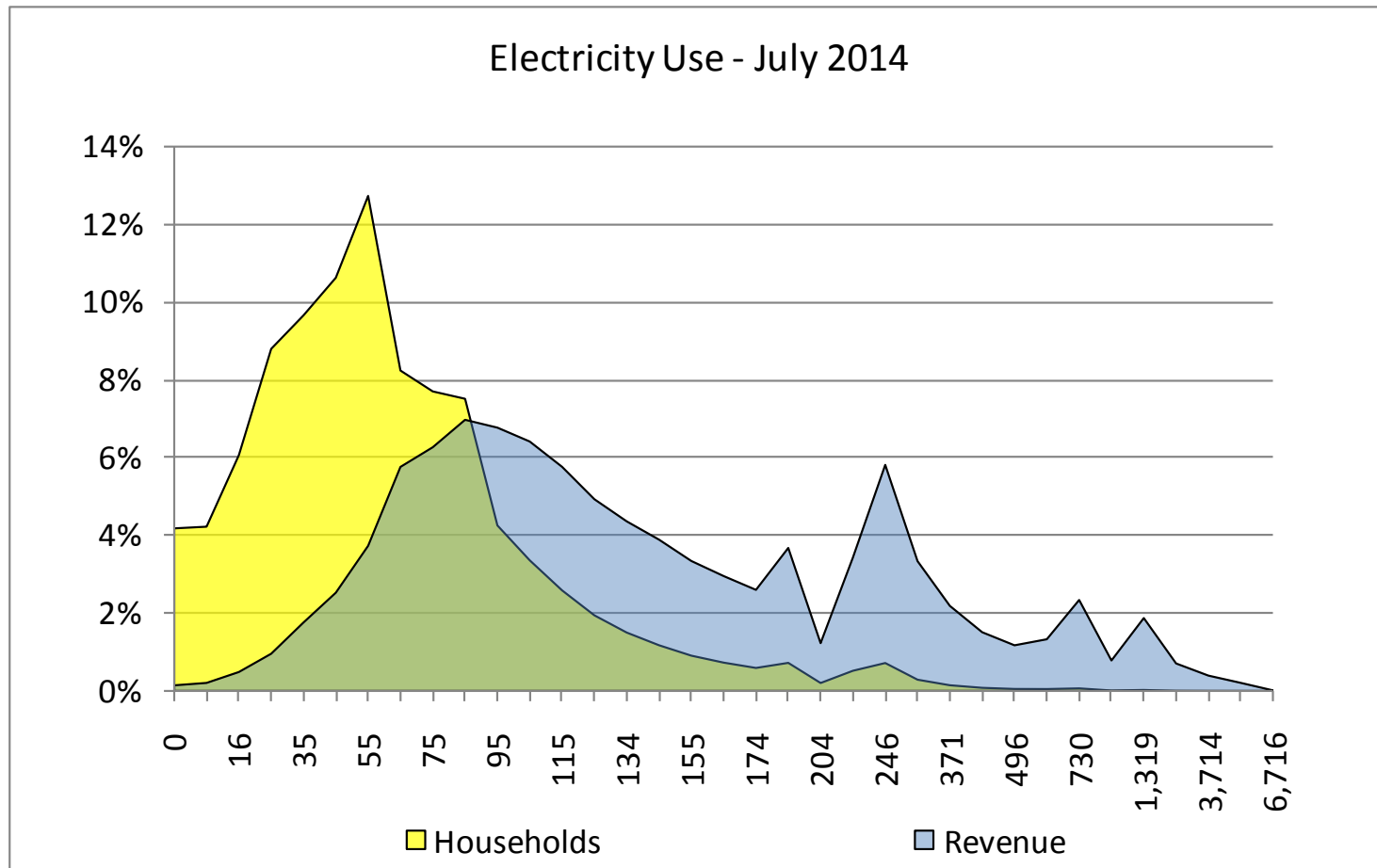


Solar PV..? We were ready



Market skimming

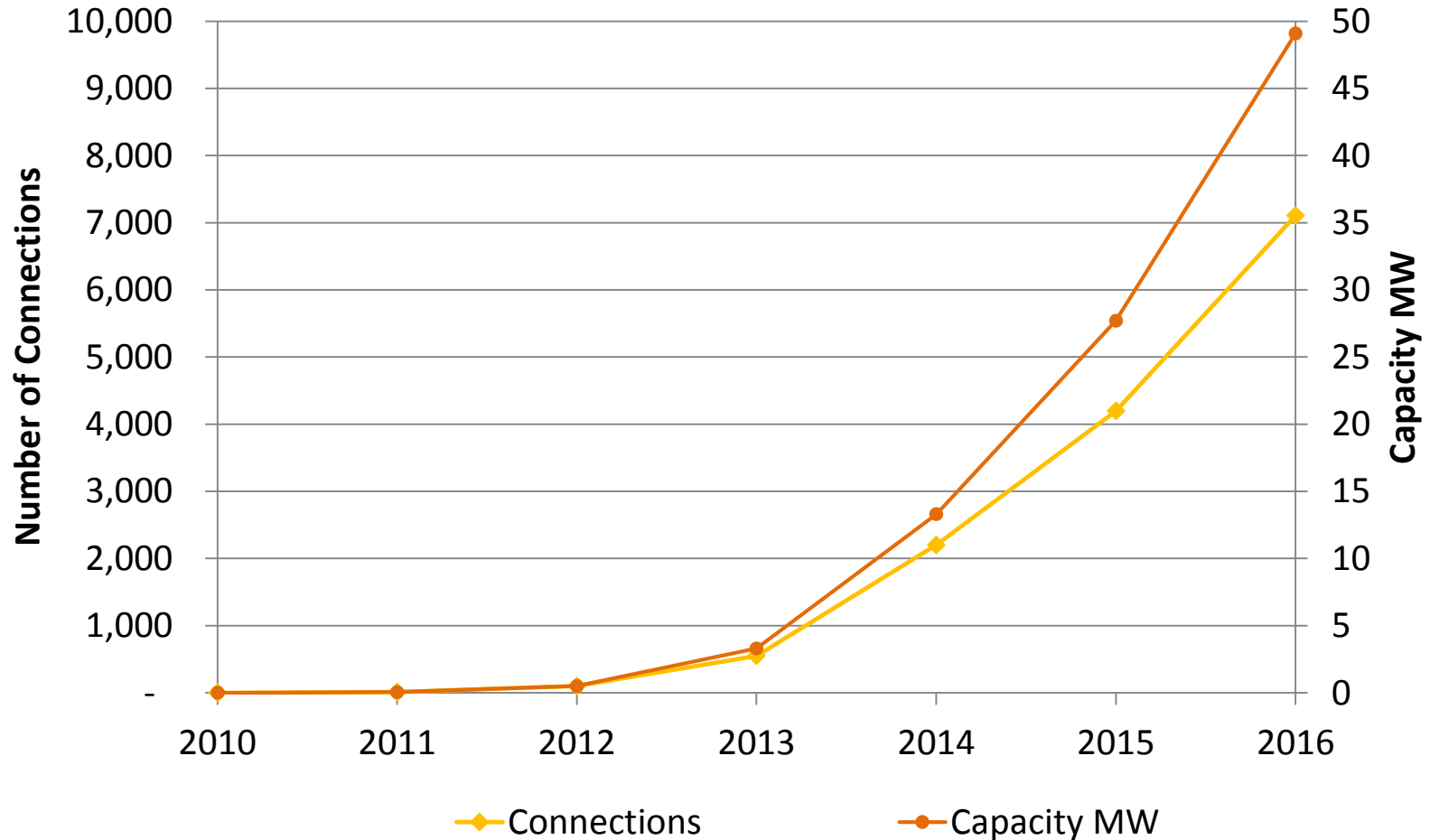
- High end consumers only 3% (113,000 households) contribute 30% of the revenue



Missing out the majority

- Prevalent Net-metering scheme (2010) appealed only for the 3% high volume residential users and commerce
- No viable proposition for the rest
 - 97% of the residential customers
 - Almost all the industrial customers

Growth of installed capacity



Important findings

- Viability matrix exposed a large residential market not served by the Net-metering scheme
- Brought out the sensitivity of the viability to capital cost, interest rate and generation
- Prompted the government to look for alternative ways to make rooftop generation attractive

Thinking aloud

- Capital grants were ruled out, no such luxuries
- Operational cash infusion
 - Energy buy back option
- Cost of financing to be reduced
 - Concessionary loans, interest rate buy down
- Capital costs to be reduced
 - Lower utility costs
 - Competition / product standardisation / industry consolidation
- Motivate an independent Solar PV industry

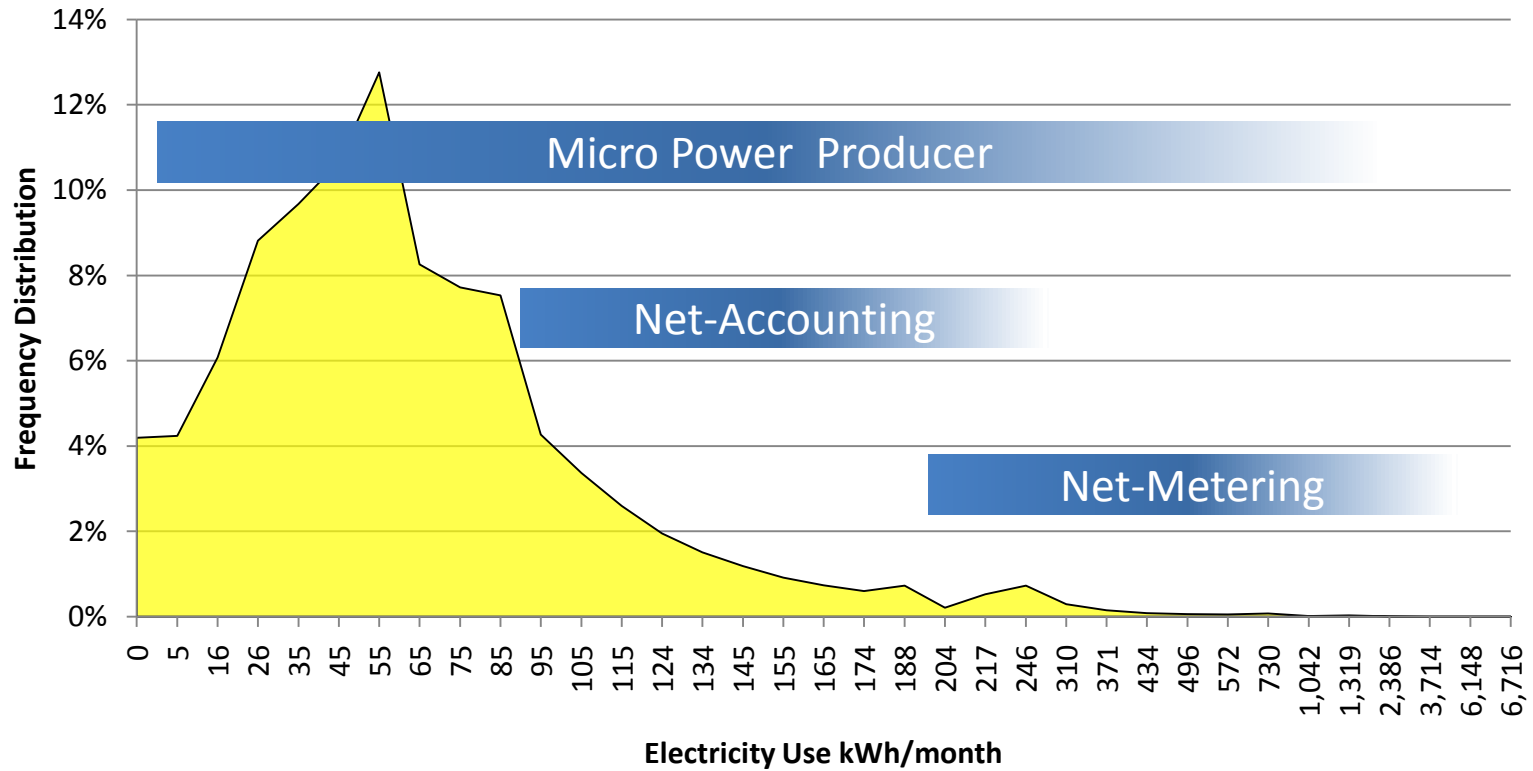
Improved scheme

- Front loaded tariff scheme
 - Export energy and earn LKR22.00/kWh (USD0.15/kWh) in the first seven years and LKR15.50/kWh (USD0.105/kWh) in the next thirteen years.
- Two new schemes, Net-accounting and Micro power producer models.
 - Large roofed industrial concerns were quick to respond

Comparison of schemes

| Description | Net-metering | Net-accounting | Micro Power Producer |
|-----------------------------------|--------------|----------------|----------------------|
| Electricity use kWh/month | 119 | 119 | 119 |
| Original bill value USD/month | 13.71 | 13.71 | 13.71 |
| Post project bill value USD/month | 0.25 | 5.14 | 13.71 |
| Bill reduction USD/month | 13.45 | 8.57 | - |
| Earnings from exports USD/month | - | 10.31 | 15.33 |
| Total gain USD/month | 13.45 | 18.87 | 15.33 |
| Simple payback period years | 7.4 | 5.0 | 6.5 |

New opportunities

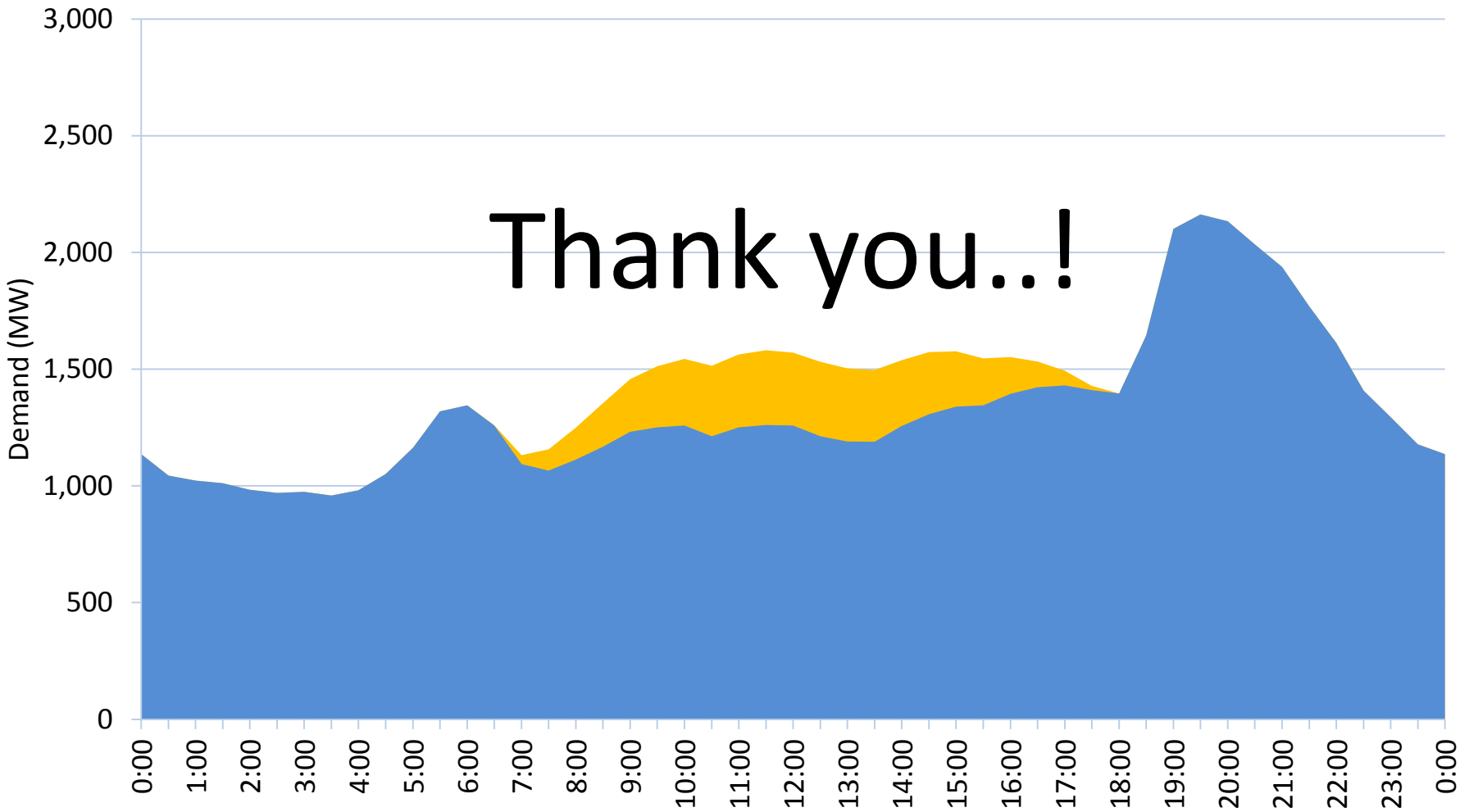


A transformed viability matrix



Market innovation

- A low interest loan scheme LECO / NSB venture
- Roof rental scheme for industrial sector
- Product standardisation (2kW offer)
- Consolidation of installation work by a third party enterprise
- Village power model, also for shared dwellings



Thank you..!