



Phasing-out economic support to mature renewables?

Drivers, barriers and policy options

Luis Janeiro, Corinna Klessmann (Ecofys)

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sharing towards 2030”***

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- ❖ *RES-E technologies are becoming increasingly competitive*
- ❖ *Volume of RES-E grows in the market, but so does the overall costs of support*
- ❖ *Several stakeholders for progressive phase-out of support to mature RES*

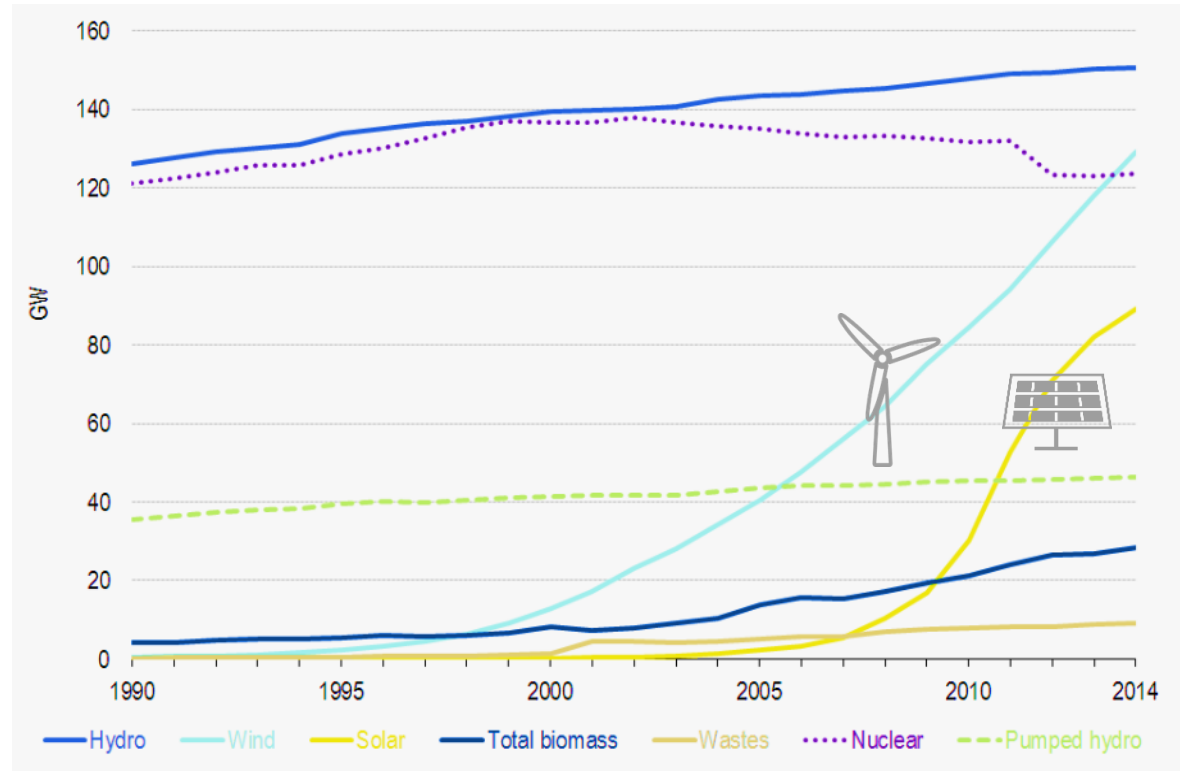


Under which conditions can support to mature RES-E be phased out without endangering the achievement of the EU RES-E targets?



Scope of the study

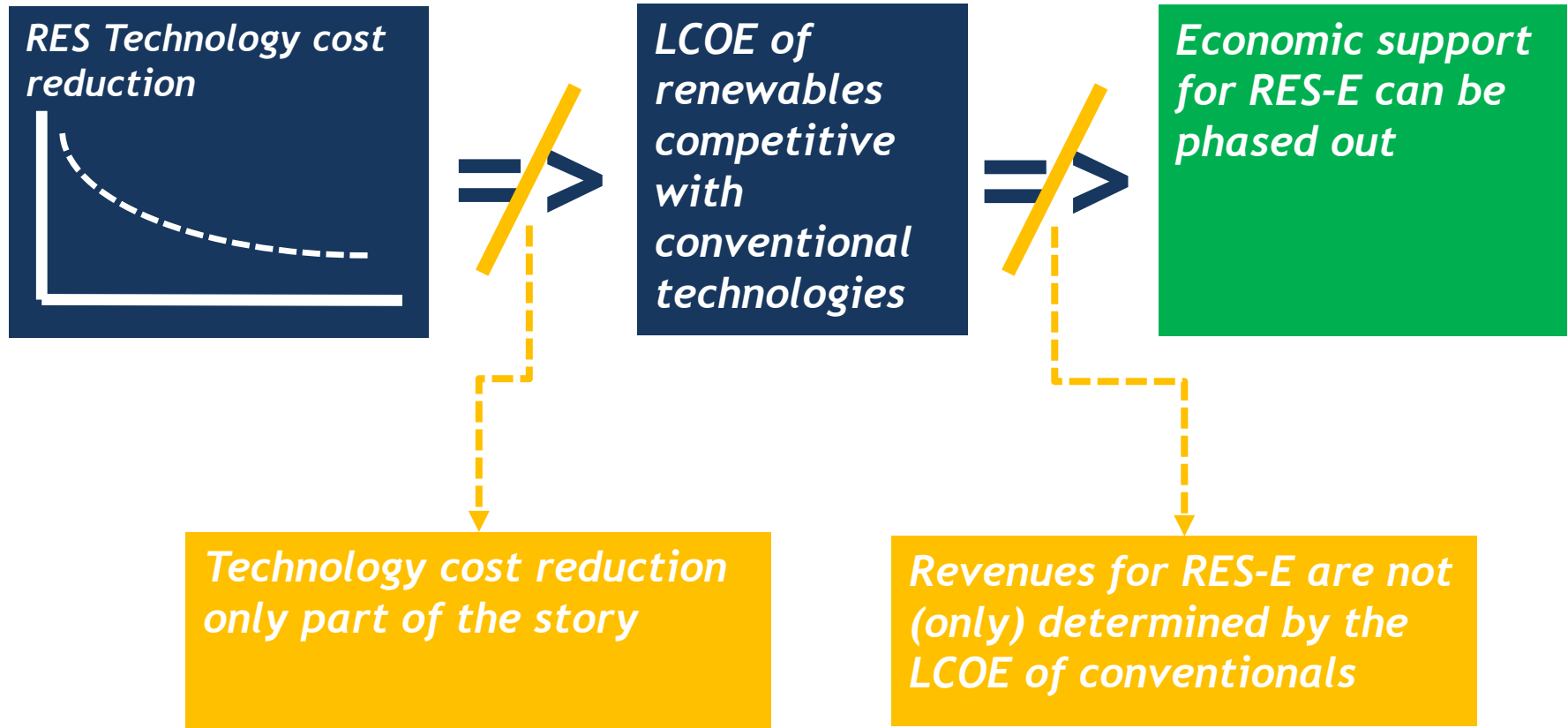
- ❖ Major mature technologies
 - ❖ Solar PV,
 - ❖ Onshore wind
- ❖ Competitiveness of RES-E in wholesale markets



When can economic support be phased-out? (I)

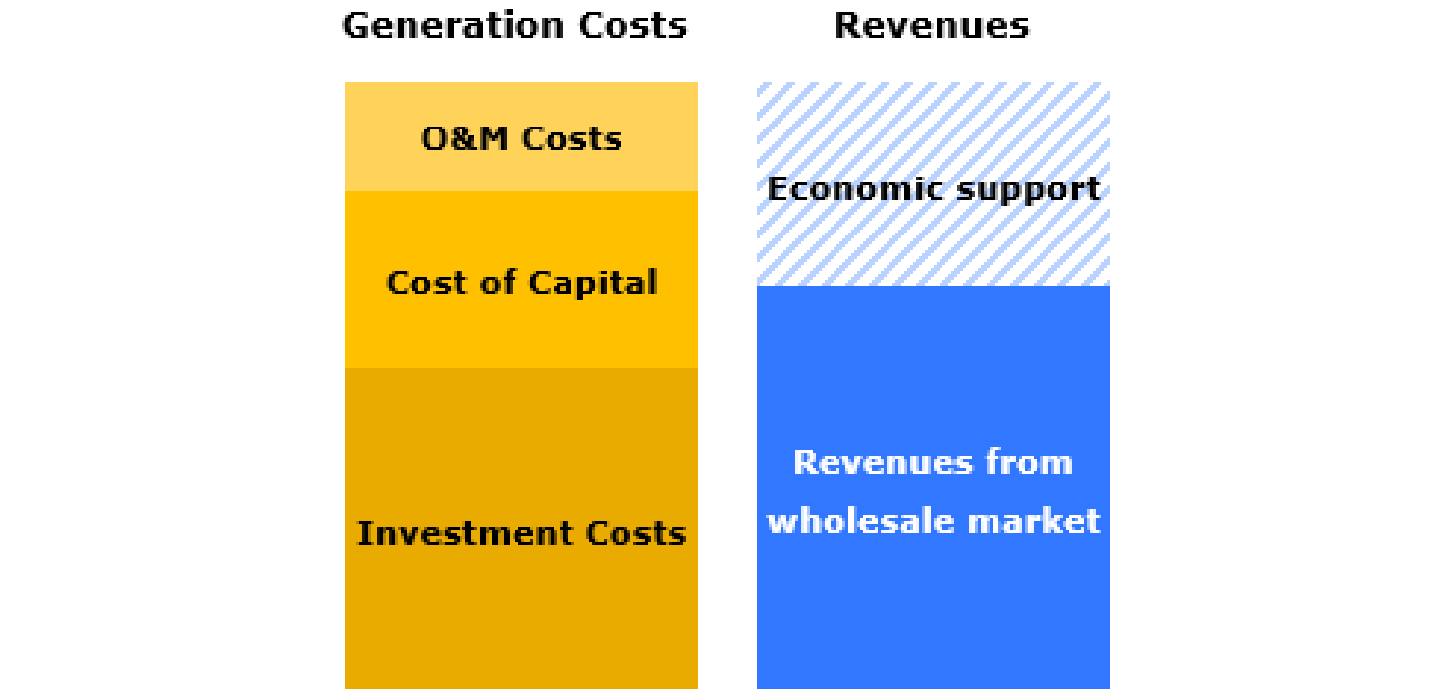


When can economic support be phased-out? (I)



When can economic support be phased-out? (II)

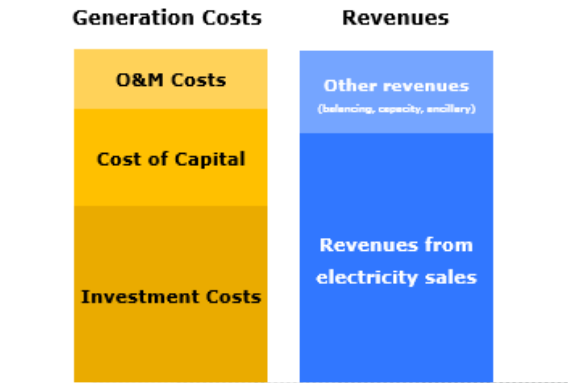
- ❖ Currently, market revenues are insufficient to cover generation costs, economic support is needed to bridge the gap:



When can economic support be phased-out? (II)

Condition 1

Level of expected revenues from power markets is sufficient to cover generation costs



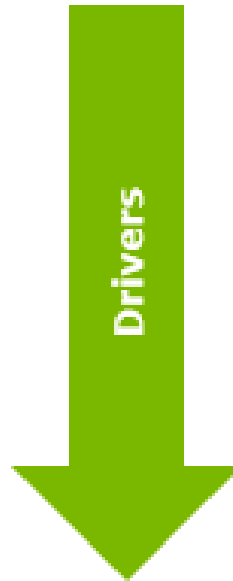
Condition 2

The level of risk associated with investments in RES-E is acceptable for investors in the energy sector



Drivers for cost reduction

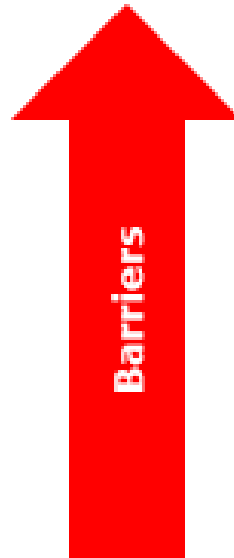
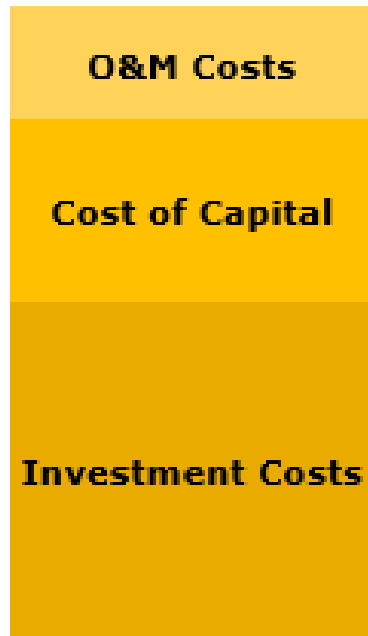
Generation Costs



- **Technology cost-reductions**
- **Long-term policy stability**
- **RES sector maturity**
- **Favourable financing conditions**

Barriers to cost reduction

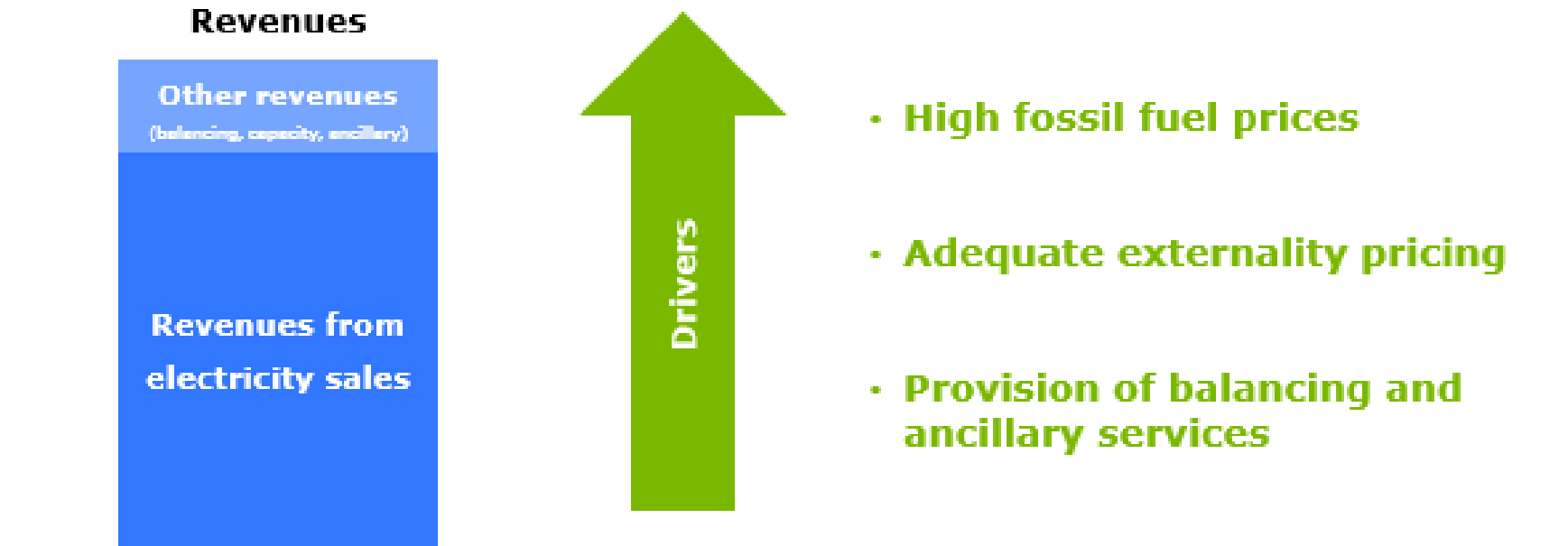
Generation Costs



- **Market entry costs**
- **Market integration costs**
- **Revenue risk**



Drivers for increased revenues



Barriers limiting revenues

Revenues

Other revenues

(balancing, capacity, ancillary)

Revenues from
electricity sales

Barriers

- Renewables 'cannibalism'
- Limited flexibility in the power systems
- Subsidies to conventional generators



Policy options towards phase out of support

Cost reduction ↓	Revenue increase ↑	Risk mitigation ⚠
<ul style="list-style-type: none">- Adoption of best practices in<ul style="list-style-type: none">- Administrative procedures- Grid connection approaches- vRES-friendly market rules (limit RES integration costs)<ul style="list-style-type: none">- Intraday markets- High resolution bids- Late gate closure	<ul style="list-style-type: none">- Sufficiently high carbon price signal- Regulatory frameworks that incentivize demand-side participation and other flexibility measures- Removing subsidies to conventional generation- Addressing overcapacity problem, e.g. by phasing out most polluting, less efficient plants	<ul style="list-style-type: none">- Long term targets, policy stability and predictability- Transparency and efficiency in:<ul style="list-style-type: none">- Permitting and grid connection procedures- Market operation rules- Grid operation rules- Adequate regulatory framework for forward markets- Financial risk mitigation instruments, such as guarantees



Conclusions (I)

- ❖ **Conditions for the phase-out of support are not there yet** (and it is unclear whether they will be met in the period 2020-2030).
- ❖ **RES support schemes will be needed for a transitional period** (until markets deliver sufficient and sufficiently predictable revenues to cover generation costs).
- ❖ **Economic support needs during this transitional period can (and should) be minimized** (with policies acting on the drivers and barriers of RES-E competitiveness identified).



Conclusions (II)

- ❖ Since LCOE for RES are increasingly competitive with those of conventional plants, a shift in focus in RES policy is required:
- ❖ Dedicated economic support to RES should increasingly give way to...
- ❖ ... an enabling policy and market framework creating the conditions for new RES investments without economic support



Comments or Questions?

Luis Janeiro, l.janeiro@ecofys.com

Corinna Klessmann, c.klessmann@ecofys.com

