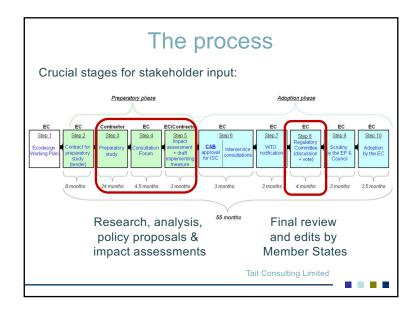
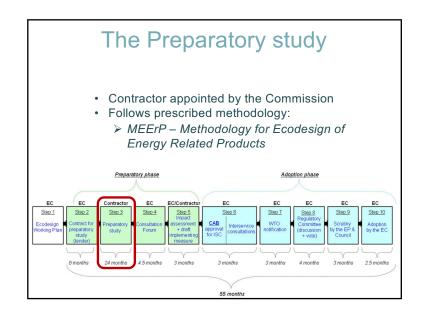
Future implementation: The ecodesign process and its challenges by examples Jeremy Tait Tait Consulting Limited Danish Technological Institute, Århus, 14 November 2016 Tait Consulting Limited

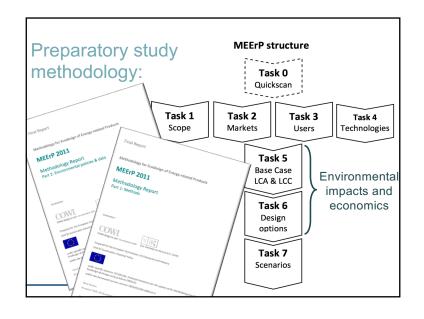


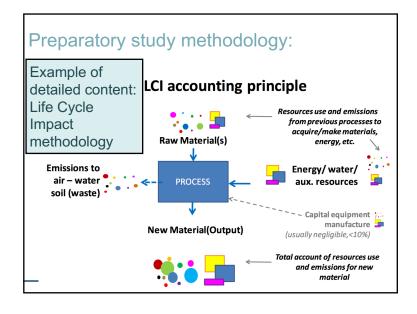
Agenda

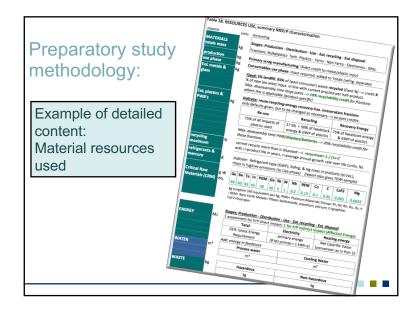
- 1. Why does the regulation take 55 months?
- 2. The preparatory study method
- 3. Opportunities to influence the process
- 4. Challenges of future product groups:
 - Short term: Lot 21 and HT Chillers
 - Short term: Lot 12 commercial display cabinets
 - Medium term: Refrigerated containers
- 5. Some factors for successful implementation

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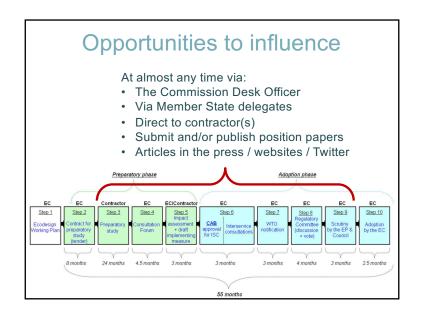


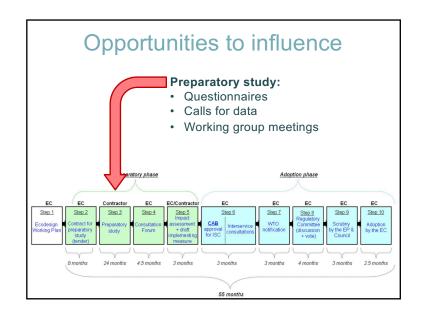


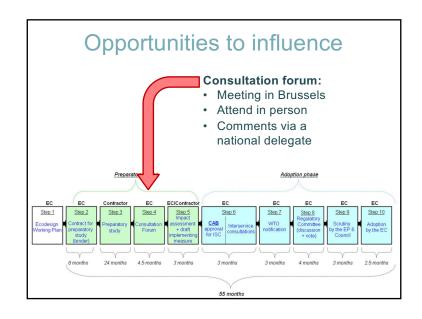
Preparatory study methodology:

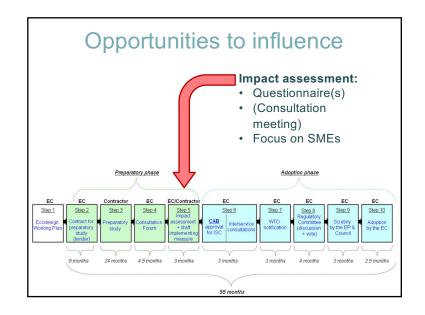
- · Highly refined analysis method
- Good for most 'typical' products
 But:
- Resources spread thinly (e.g. c.f. USA)
- MEPS based on least life cycle cost now: industry 'learning' means MEPS could be more ambitious
- 55 month process: data is old when MEPS in force
- · Inadequate focus on test methods beforehand!
- It's a 'steamroller' contract not easy to pause
- Very dependent upon data and stakeholder input

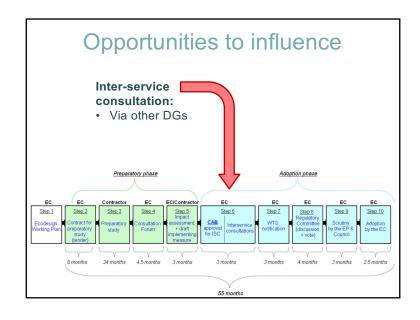
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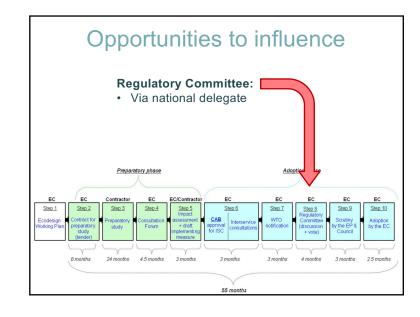












Opportunities to influence

Recommendations:

- Subscribe for CF and prep study e-bulletins
- · Earliest intervention has greatest impact for least effort
- Provide data on market and performance (confidentially if needed)
- Build consensus: collective input is stronger (e.g. industry associations, NGOs), especially multi-state
- Be constructive; be specific
- Offer solutions, not just problems

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Example: Lot 21

"Air heating products, cooling products, high temperature process chillers and fan coil units"

- Covers:
 - air heating <1MW</p>
 - cooling (air and water) <2MW ←
 - fan coil units
- Technically complex
 - 54 pages; 162 definitions; 30 tables (plus transitional test methods; plus explanatory memorandum)
 - 'Technology neutral' by handling multiple fuels ($\eta_{\text{sc}},\,NOx)$
 - Seasonal performance
 - Multiple rating conditions

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Comfort chillers

Water to air AC

HT process chillers

Air to air AC

Example: Lot 21

Challenges (chillers):

 Originally no MEPS for 80% of process chiller capacity (i.e. HT chillers). So CLASP, EPEE (JIEG), stakeholders & DG ENER developed some!



 Defining and differentiating comfort and HT process chillers. 'Stated end use' counts.

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Example: Lot 21

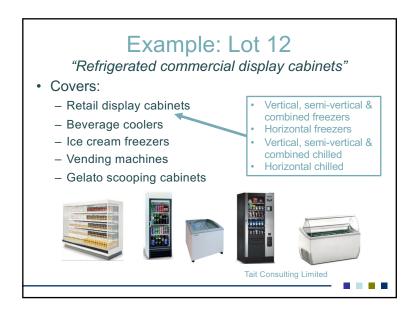
Challenges (chillers):

Concession was inserted for heat pump chillers:

- This Regulation shall not apply to products meeting at least one of the following criteria:
 - (c) products covered by Commission Regulation (EU) No 813/2013 with regard to ecodesign requirements for space heaters and combination heaters⁶;

Net result: All reversible chillers <400kW excluded and subject to no cooling efficiency requirement at all (=11% of comfort chilling capacity).

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Example: Lot 12

"Refrigerated commercial display cabinets" Challenges:

- Test methods were developed in parallel to reg.
- Rating temperatures (M1, M2, H2 etc.)
- Efficiency data: quality, age, availability, comparability
- Appropriate stringency (e.g. glass doors)
- Dealing with variants ('one-off' & custom made)
- Allowing appropriate exclusions (are 16 in total, e.g. corner cabinets, static air, wine coolers)

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Example: Refrigerated containers

- Otherwise known as 'reefers' or ISO containers for shipping and articulated trucks (like WICR)
- Confirmed by Mr Timmermans last week as in Commission Working Plan 2017

Challenges:

- Multi-fuel: diesel or electric hook-up
- · Covered by ATP standard, but not for efficiency
- · Very varied and stressful operating conditions
- Obscure ownership and 'placing on EU market'

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Some factors for successful implementation

- 1. Preparation! Stakeholder engagement throughout, with data sharing
- 2. Clarity on test methods (hopefully published!) and associated test data
- 3. Raise awareness; explain requirements to suppliers as soon as draft is available
- 4. Plan for how market surveillance will work, with adequate information requirements.

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Thank you Århus!

