

Evaluation and Monitoring for the EU Directive on Energy End-Use Efficiency and Energy Services

Integration of TD and BU results

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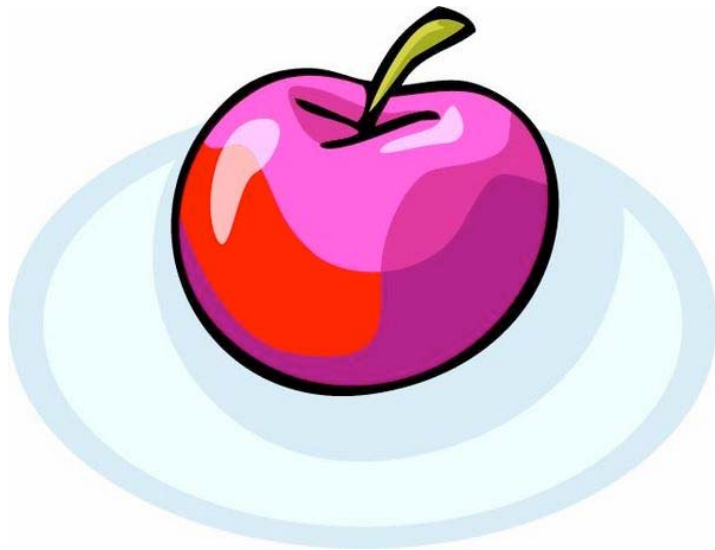
WP 6 task on integration

- ESD demands:
 - „Harmonised calculation model based on a combination of TD and BU methods“
 - Prove 20-30% BU coverage and 9% energy savings
 - Trade-off between accuracy and administrative workload

- EMEEES-WP 6.1 approach:
 - Framework to guide TD and BU method development
 - Check on consistency of proposed TD and BU methods
 - Calculation scheme for ESD energy savings

Consistency in integrating TD and BU results

Top-down



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Bottom-up



=> ESD energy savings ?

Consistency: choices and comparable savings

Choices for the EC:

- All or additional energy savings
- Correction factors for TD and BU methods
- Baselines / defaults defined per BU method

Choices for MS:

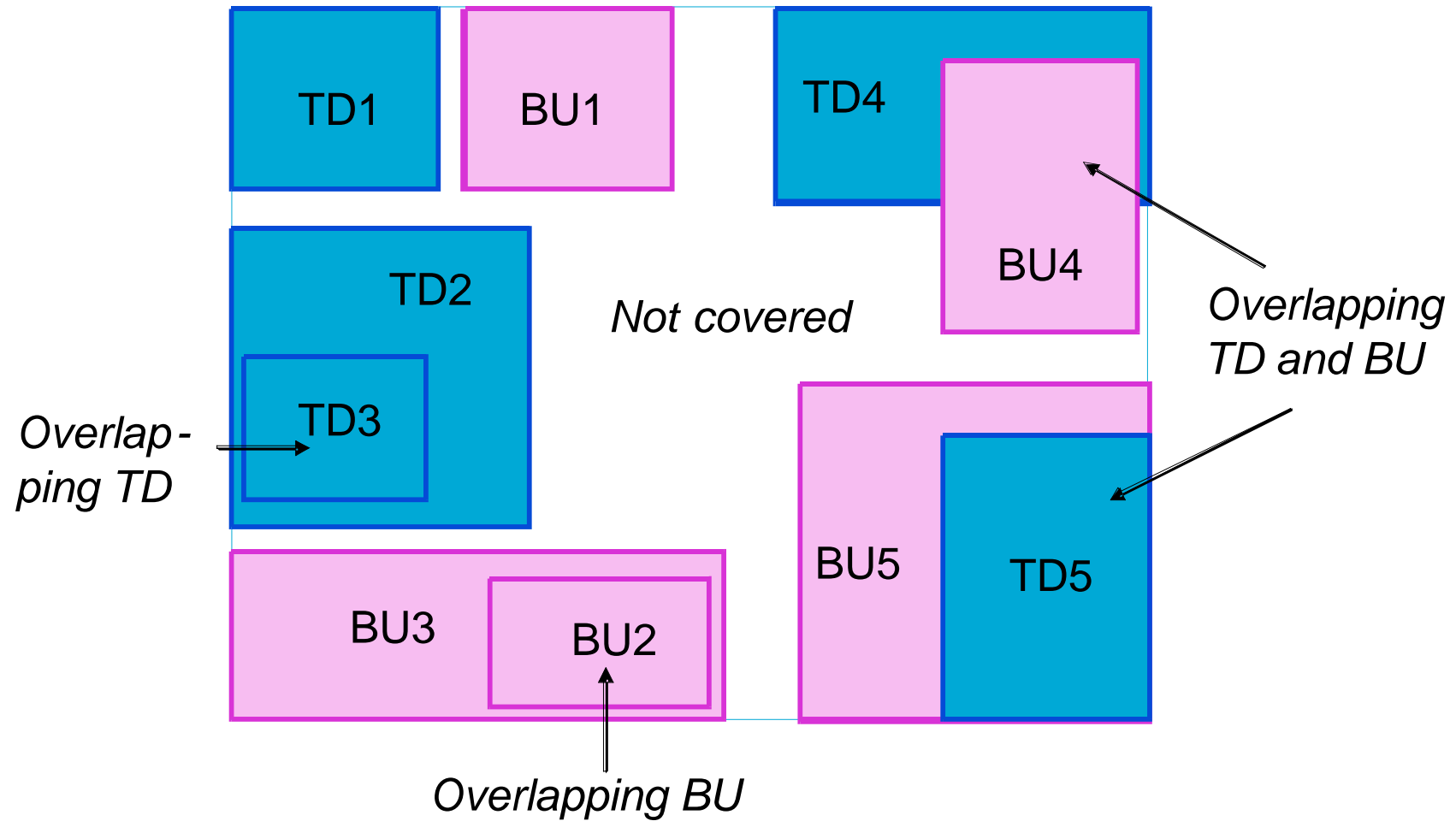
- More or less TD and BU methods
- Different types of BU and TD methods
- 3 different levels of detail for BU methods

How to consistently add up TD and BU results, calculated in so many ways?

Calculation: overlap TD and BU results

- Coverage:
 - Each TD and BU method covers part of ESD energy use
 - Some parts covered more than once > overlap when adding up TD and BU results
- Examples overlap:
 - TD methods: e.g. main appliances and household electricity use
 - BU methods: e.g. electric motors and energy audits
 - TD and BU combinations: space heating dwellings (TD) and high efficiency boilers (BU) or envelope existing dwellings (BU)

Coverage and overlap for TD and BU methods



Application of EMEEES methods: assessment

Applicable TD methods:

- Data availability and correction possibilities > 6-8 of 14 TD-methods presently applicable for MS

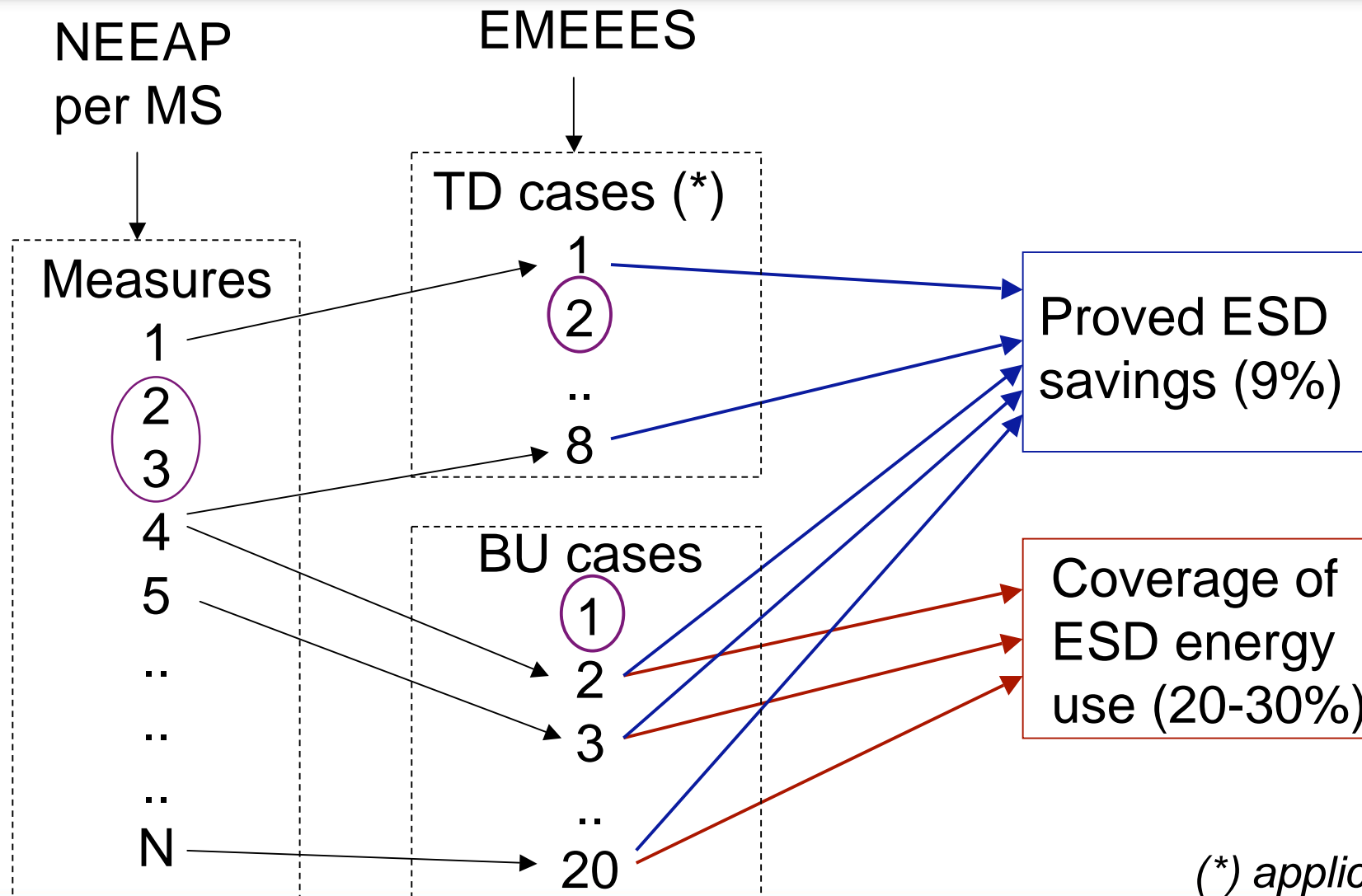
Analysis of NEEEPs as to methods:

- Inventory of measures applied in each NEEAP
- BU and TD methods that are fit to evaluate chosen measures
- Per MS determination of BU coverage

Assessment of EMEEES methods:

- Can MS prove 20-30% BU coverage?
- Can MS prove 9% savings with methods?
- Most important methods or lacking methods

Application of EMEEES methods: assessment



Application of EMEEES methods: results

Proving BU coverage (20-30%):

- Total set of BU methods > **90% coverage of ESD energy use**
- Horizontal measures are important for coverage
- Only relevant BU methods > all except 3 MS prove minimum coverage
- Large contributions: space heating dwellings/passenger transport

Proving savings target (9%):

- One-third of MS could have problems due to very different reasons: no transport, no space heating, no ECS measure, few measures, etc.
- Most important methods: for dwellings and road vehicles
- Some lacking methods: CHP, street lighting, mobility management

Methods:

- ESD demands met with EMEEES-set, but MS may have problems if:
 - few BU methods for targeted energy use
 - no horizontal measures > no broad methods
 - only 6-8 out of 14 TD cases to be applied

Observations / conclusions

Consistency TD/BU results:

- Determined by decisions of ESD Committee on correction factors, baselines and default values for TD and for BU
- Also dependent on choices of MS: TD (selection, type), BU (selection, level), etc.

Calculation of ESD savings:

- Choosing non-overlapping TD or BU methods > avoids corrections for overlap
- Trade-off between effort and quality of ESD savings figure asks for more than adding TD and BU results plus overlap correction

Application of EMEEES methods:

- Set of methods can meet ESD demands, provided that MS can apply enough BU methods, which is partly defined by their measures in the NEEAP

Thank you very much for your attention



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