

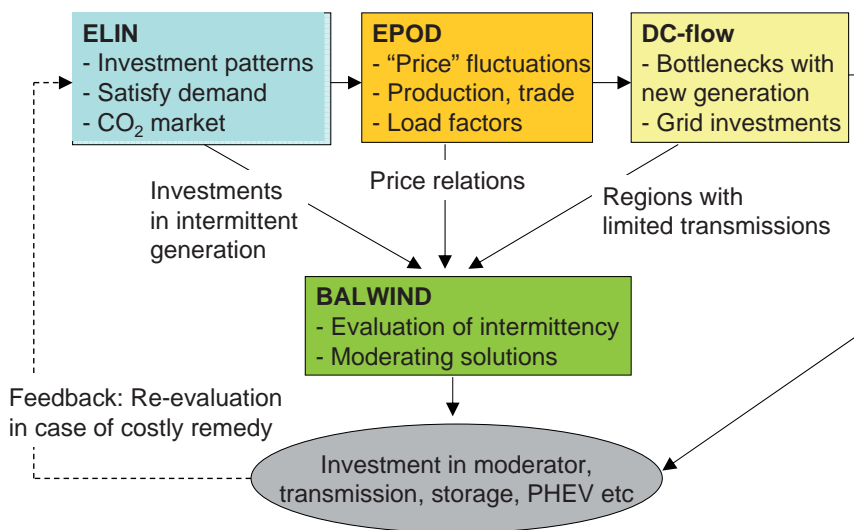
# Modelling the European Electricity-supply System

Four models are used to analyze the long-term development of the European electricity system in the Pathways project. Due to several reasons it is in this case more efficient to use four models each addressing specific issues rather than one “super” model trying to incorporate “as much as possible”.

Four models are used specifically to analyze the long-term development of the European electricity system. ELIN is an investment model which generates cost-efficient investment strategies for the European electricity supply system during the coming 40-50 years. EPOD is a production model for a selected year using the output from the ELIN model as main input.

Other important input used both in ELIN and EPOD is taken from the extensive Chalmers Power Plant Database. DC-flow is a grid-capacity model which uses output from both ELIN and EPOD with the objective to identify grid bottlenecks during e.g. high-load situations. BALWIND is developed as an add-on to the BALMOREL model aiming specifically at analyzing system effects of short-time fluctuations from wind power.

Due to reasons of transparency and computational limitations



it is in this case more efficient to use several models each addressing specific issues rather than one “super” model trying to incorporate “as much as possible”. Therefore, these four models work closely together. In the figure below, the modelling process involving all four models is shown for an ongoing project activity where the objective is to assess consequences

of a significant wind-power penetration in a selected North European region.



*For further information:*  
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