World’s first large scale BTL-facility
Σ1 Schwedt, Germany

TP Biofuels - 2nd Stakeholder Plenary Meeting
From pilot to demonstration
Brussels, Jan 22nd 2009

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BTL Value chain – conversion technology

- Biomass
  - Waste wood 10..50 %
  - Forest residues: < 10%
  - Short rotation crops 0…50 %
  - Straw < 10 %
  - Others: 0..20 %

- Carbo-V Gasification
- Gas Cleanup and Compression
- FT-Synthesis/Upgrading

- BTL Diesel/Naphtha
From Pilot to Demonstration

CHOREN Beta Plant Freiberg/D:
- 45 MW thermal
- 68,000 t/a feedstock
- 18.0 million l BTL

Challenges on the pathway to Σ:
- Implementation of 50,000 ha of short rotation crops (SRC)
- Effective biomass drying
- Scale up Carbo-V gasifier by x 1.3… 4
- Process optimization and demonstration of the integration of various mature process units
  - > 100 process options evaluated
  - > 110 process unit
    - Constructability
    - Operateability
    - Safety
    - Reliability
- Financing/risk share
Demonstration plant Schwedt

- 640 MW<sub>th</sub>
- 1,000,000 t/a bio-mass
- 200,000 t/a BTL
- ΔCO2: - 650,000 t/a

- 32 ha factory premises

Investment: > 800 million €
Partners & Sustainability

All partners who are ready to share project risks are welcome
- Feedstock supply
- Construction
- Financing

Sustainability
- Wheel to Wheel LCA will be performed in parallel to the engineering phase to confirm the GHG-reduction > 80 % compared to fossil fuel
- Apart from waste wood, short rotation crops (SRC) will take a major position because of their lower environmental impact compared to other agricultural products.
- SRC implementation will be reviewed by agricultural and environmental experts
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