

A decorative green line starts from the left edge of the slide, passes through a black sphere with white dots, and curves upwards and to the right, ending in a loop above the yellow title bar.

Low C V P Paper  
UK Bio-Diesel economics

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# Low C V P Paper

- ✦ Seed to tank economics
- ✦ Teesside Network
- ✦ Assumptions
- ✦ Results
- ✦ Proposals



# Seed to tank economics

- ✦ Developed from Newcastle University work
- ✦ Tested against real market values
- ✦ Stretched against realistic technology targets
- ✦ Fixed/ variable costs tested against technology providers and EU market players



# Teesside Network

- ✂ Terra Industries
- ✂ Agronomists
- ✂ East Durham farmers
- ✂ Semb-Corp utility generator
- ✂ Simon Storage
- ✂ Petroplus
- ✂ Farmway

# Assumptions

- ✚ Return on capital set for local development
- ✚ Brown-field development site
- ✚ Grant aid will be forthcoming from local government
- ✚ Depreciation taken over 15 years
- ✚ Repayment rate set at 10%
- ✚ Diesel price \$225/ te
- ✚ Farm is difficult to model - issue of return on capital employed
- ✚ Oilseed supply modeled by Local Government District. Winter oilseed rape and total set-aside area were taken from the national agricultural census, 2002. The potential grown area was assumed to be main regime plus 20% of set-aside i.e. 1 year in 5 for rotational considerations).

# Results

- ✖ Does not make economic sense today
- ✖ Reducing duty on FAME encourages investment
- ✖ Grant aid encourages JV's
- ✖ Low interest encourages JV's
- ✖ Biggest sensitivities are on the farm. For example, yield, area aid, oil content of seed
- ✖ In order to make it happen we need to find a way of sharing out the gain/ pain

# Results

☀️ Carbon impact is a reduction of 3%

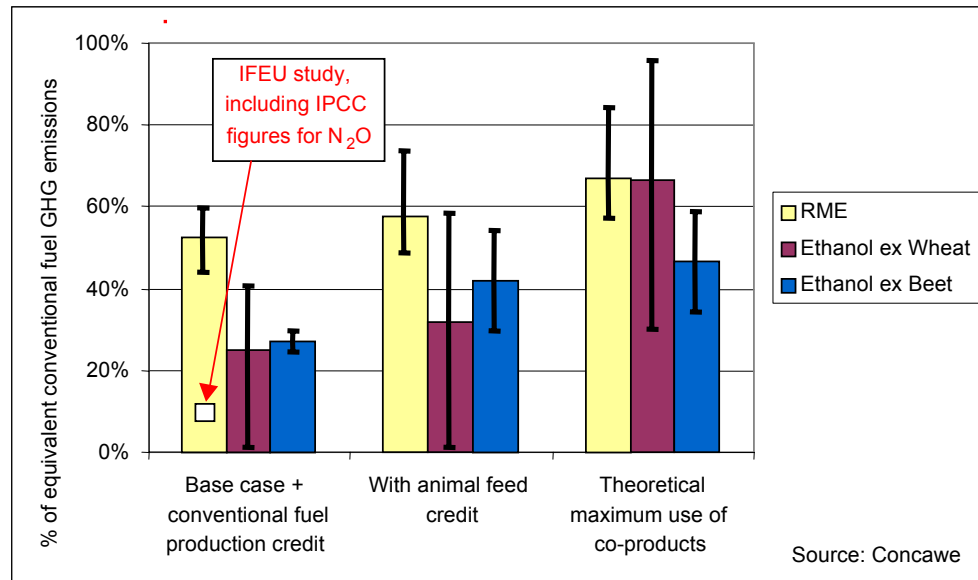


Figure shows % GHG **saving** for RME relative to diesel



"Rpt\_02-2 (Concawe biofuels report).pdf"

# Results

- ✖ 65% reduction assumed – as all bi-products have value
- ✖ 95% of fuel energy from mineral diesel
- ✖ Hence energy content of blend is
  - $95\% + (5 \times 0.35)\% = 97\%$
  - 3% reduction in carbon emissions



# Proposals

- ✦ Investment in bio-diesel blending can be delivered on relatively short timescales
  - Proven Manufacturing and end use Technology – UK and EU
  - Skill bases exist in UK
  - UK Logistics enable short delivery timescales
- ✦ Teesside Consortium continues to plan investment
- ✦ Looking for involvement with HMG to build on assumptions and develop way forward to assure support is focussed to deliver UK carbon benefits
  - Grants/ Loans/ Duty status

# Proposals

- ✖ For example
- ✖ Investment in a number of local Bio-Diesel facilities can generate 3% reduction in CO<sub>2</sub> emissions from Diesel Engine Road Vehicles
- ✖ This is equivalent to 1.5% reduction in emissions from all passenger car vehicles – assuming 50% of car park is diesel powered.