



Through GRIP to Mitigation Policy

A Case Study for Spatial Planning

GLASGOW AND THE CLYDE VALLEY  
**S**TRUCTURE **P**LAN **J**OINT *committee*

# Glasgow and Clyde Valley Key Facts

- Area of 3400 sq.km
- 1.8m population, 34% of Scotland's.
- 8 local authorities on 1 Joint Committee
- Post-industrial economy
- Large suburban train network



# Climate Change and Scotland

- Draft Scottish Climate Change Bill
  - Non-statutory 80% emissions reduction target
- Scotland's Climate Change Declaration
  - [www.sustainable-scotland.net/climatechange](http://www.sustainable-scotland.net/climatechange)
- SPP6: Renewable Energy
- Planning Advice Note 85 'Methodology for Calculating Reduced Carbon Emissions'

# InterMETREXPlus

- INTERREG IIIC project extension
- 4 partners:
  - Glasgow and Clyde Valley;
  - Stockholm,
  - Veneto, and
  - Emilia-Romagna
- GHG inventory of six Kyoto Protocol Greenhouse Gases
- 3 Workshops - 2050 Scenarios production

# Greenhouse Gas (GHG) Inventory

- Inventory divided into 4 sectors:
  - Energy (including: domestic, services, industrial, transport all modes, energy industry and ‘fugitive emissions’);
  - Industrial processes;
  - Agriculture; and
  - Waste.
- Energy sector: 89% of GHG emissions

# GCVSPJC GHG Emissions from Energy 2004

Energy sub-sector	% of Emissions
Domestic	34%
Transport	24%
Industrial	16%
Services	10%
Fugitive Emissions	10%
Energy Industry Own Use	3%
Other	2%
Energy Transformation	1%

# Stakeholder Workshops Aims

- To produce a scenario for an 80% emissions reduction for Glasgow and Clyde Valley area by 2050
- To produce intermediate targets for 2025 for GHG emissions reduction
- Promote debate amongst key stakeholders on climate change policy in Glasgow and Clyde Valley area.

# Workshop Stakeholders

- Local Authorities;
- Regional and National Transport Agencies;
- Forestry Commission;
- Scottish Environmental Protection Agency;
- Scottish Natural Heritage;
- Communities Scotland;
- Scottish Enterprise;
- Scottish Government;
- Glasgow Chamber of Commerce

# GRIP Model Program

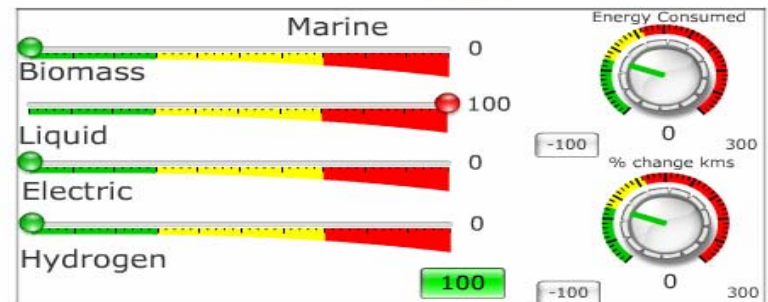
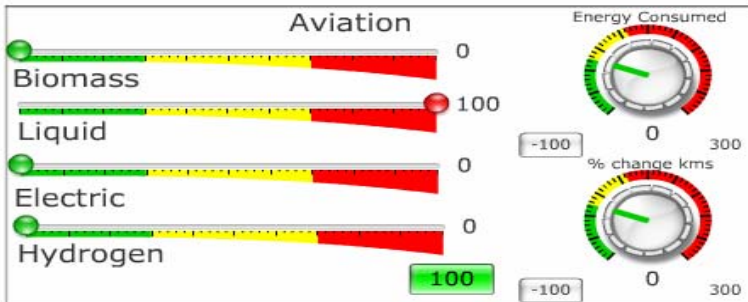
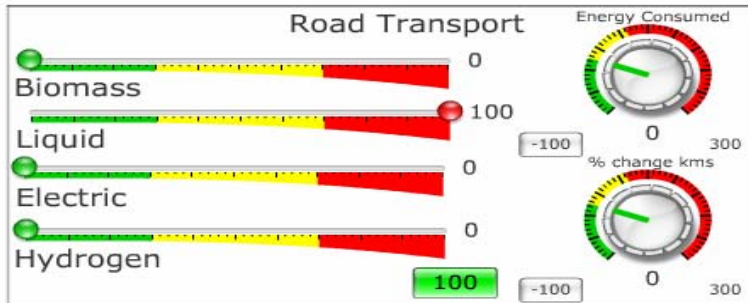
225,652  
Energy Consumed - GWh  
0%

61,864  
Thousand Tonnes CO2  
0%

Scenario



## Transport



### Economy

Domestic

Services

Heavy Industry

Light Industry

Energy Industry

Transport

GRID

On-site

Hydrogen

CHP

# Workshop Scenario Outputs

- No workshop achieved 80% reduction by 2050

	Emissions	Energy Consumption
Workshop 1	-78%	-37%
Workshop 2	-77%	-29%
Workshop 3	-78%	-34%

# Stages in Policy Preparation

1. Establish emissions baseline
  - (GHG inventory)
2. Policy analysis against baseline
3. Establish reduction trajectories
  - (Scenarios)
4. Implement policy to reduce emissions
5. Monitoring and review of policy
  - (another GHG inventory)

# Metropolitan Spatial Policy

- 2 main areas where Metropolitan areas can restructure to increase sustainability:
  1. Reducing the need to and impacts of travel
    - Mixed uses and planning regulation
    - Enable carbon lite movement
  2. Low carbon energy consumption opportunities
    - Enable local power generation
    - Enable renewable energy developments

# 2025 Transport Scenarios

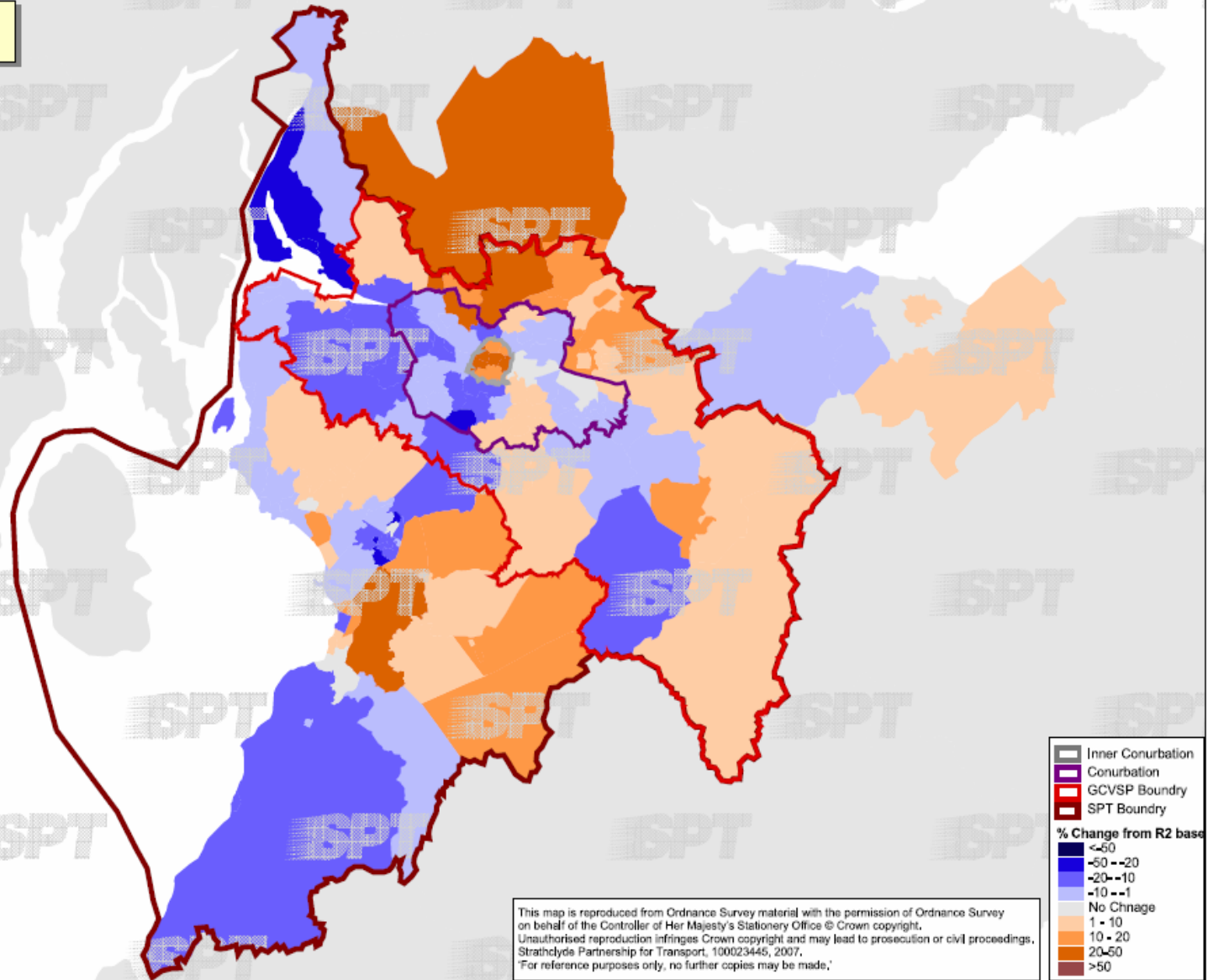
- 3 Workshop Scenarios = average 30% reduction in Road Transport Emissions
- Regional Transport Model Policy tests
  - Cordon charging (CC)
  - Road user charging (RUC)
  - RUC & CC
  - Low CO<sub>2</sub> Public Transport
  - Low CO<sub>2</sub> Public Transport & RUC

# Regional Transport Model

## SPT Policy Test Average Scores by 2021

Description	Population (%)	Jobs (%)	CO2 (%)
Cordon Charging Policy Average Total	1.6	0.8	-5.2
Road User Charging Average Total	1.9	1.4	-31.6
Road User Charging & Cordon Charging Average Total	2.4	2.7	-26.4
Public Transport Average Total	0.2	0.3	0.6
Average of all Policies tested	1.7	1.4	-19.2

**Total Population**



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Legend:

- Inner Conurbation
- Conurbation
- GCVSP Boundary
- SPT Boundary

% Change from R2 base

- <-60
- 50 - -20
- 20 - -10
- 10 - -1
- No Change
- 1 - 10
- 10 - 20
- 20 - 50
- >50

# Spatial planning implications

- Achievement of significant emissions reduction
- Potentially slower growth in jobs
- Demand for concentration of households within the inner conurbation cordon and in the lowest charging zones.
- More land release around stations and brownfield land

# Thank you



# Project Report available to download

[www.gcvcore.gov.uk](http://www.gcvcore.gov.uk)

