A GREEN TRANSPORT STRATEGY FOR DUNDEE

Neil Gellatly
Head of Roads & Transportation
Dundee City Council
DUNDEE

Population of ~150,000 and growing
Regional Centre for ~400,000
Modern young city
Health and Fairness Inequality
Multi Modal People
• Well connected within Scotland
• Essential to improve UK and International Connections
• Dundee Waterfront one of Europe’s most significant regeneration projects
• Dundee Partnership
Green Space
ROADS AND TRANSPORT DIVISION

- Sustainable Transport
- Parking
- Network Management
- Traffic and Transport
- Roads Maintenance Partnership
- Street Lighting Partnership
- Corporate Fleet Management

CITY DEVELOPMENT DEPARTMENT

- Full Engineering Consultancy in house
- Full Architect and Property services in house
- Planning and Economic Development too!
OUTDOOR LIVING – ACTIVE TRAVEL

- Opportunity to Re-prioritise travel modes
- Transport improvements usually by – product
- Usually encourages Active Travel and Outdoor Living
- Regeneration can raise confidence
REGENERATION – TRAFFIC FREE

1977 - FIVE LANE HIGH STREET

NOW - CITY CENTRE PEDESTRIANISED ZONE
CARS AND PARKING NEAR BUT ON THE EDGE OF THE CITY CENTRE
Dundee City Council is a pioneer in electrification of transport:

- 78 pool and fleet vehicles EV, well utilised through revised staff travel policy
- Building a charging infrastructure to support individual and business EV users
- Commercial interest in business fleets
- Co-Wheels EV Car Club available on-street where people live
- Office Low Emission Vehicles - Go Ultra Low City
- Huge reduction of Carbon consumption and emissions from transport
- Local Bus Operators investing in Diesel Electric hybrid buses
- Working with Scottish Cities Alliance to develop Hydrogen Fuel Cell technology
- Increasing concern with Air Quality Hot Spots
ELECTRIC AND LOW CARBON VEHICLES

Leading By Example

- 78 pool and fleet vehicles
- EV Mixed fleet of Renault Kangoo vans, Peugeot and Mitsibushi IMEV and IONs, Nissan Leaf and Kia Soul and Nissan ENV 200
- Well utilised through revised staff travel policy, over 250,000 miles pa on zero emission (almost all within the urban area of Dundee)
- Parking Team converted to 100% EV fleet
- Building a charging infrastructure to support individual and business EV users – Traffic Regulation Orders and fleet vs public separation now needed
- 13 Rapid Chargers and over 50 Fast Chargers – About to triple the number through new charging hubs funded by UK and Scottish Governments through Go Ultra Low City funding £1.5M
ELECTRIC AND LOW CARBON VEHICLES

Private sector invest in electrification of transport (Taxi Evs):

- Commercial interest in business fleets

Previous Transport Minister, Derek McKay MSP launched the Dundee 203020 electric taxi fleet in April 2015, 30 Nissan Leaf initially and aim for 100% EV fleet by 2018, Nissan ENV 200 hopefully allow EV Wheelchair accessible taxi

Major public/private partnership with Dundee 203020, transport Scotland, Energy Savings Trust, Nissan and Dundee City Council – but very much an entrepreneurial approach. Now 70+ EV Taxis in Dundee
Car Club going electric

- Introducing EV Car Club available on-street where people live

Dundee City Council, Developing Car Clubs in Scotland, EST and Co-Wheels
7 EV and 6 ULEV Car Club vehicles later in May 2015, launched 20 April 2015

To include regulated parking and on-street EV Charging infrastructure
Other Developments around Evs and ULEVs

- Huge reduction of Carbon consumption and emissions from transport possible
- Local Bus Operators investing in Diesel Electric hybrid buses
- Working with Scottish Cities Alliance to develop Hydrogen Fuel Cell technology
- Increasing concern with Air Quality Hot Spots
- Evs and ULEVs don’t resolve congestion
DUNDEE – INTELLIGENT TRANSPORT SYSTEMS

Modern Urban Traffic Control System that controls:

- 50 junctions and 80 pedestrian Crossings. Most junctions covered by CCTV.
- Moving over to a common database (Cloud Amber) with Strategy Manager which will allow new data feeds from:
  - Parking Guidance System,
  - Public Transport Real Time Information
  - Urban Traffic Management Control
  - Remote monitoring - Maintenance of signals
  - All Parking payments systems and control systems modern and centralised through Hub

The Future is happening now:

- Air Quality monitoring
- CCTV
- Traffic / transport planning information
- Traffic Counts
- Intelligent Parking Enforcement Systems
- Bluetooth journey time alongside Transport Scotland’s National System
DUNDEE – ONE OF EUROPE’S SMART CITIES

Dundee City Council is collaborating with UK and European Partners to

- Give a smarter way of living – with focus on transportation integration
- Looking at making travel more sustainable
- Make multi modal travel as easy as possible – ABC Ticket is one year old
- Evs at heart of this - bikes and cars / vans, especially shared ownership
- Maximise total integration of Intelligent Transport Systems
- Individual Mobility accounts – All information in one place
- Quickly commercialised as an essential daily transaction tool
- Green Tourism in future, everything self service & in advance
## MILL Dundee

<table>
<thead>
<tr>
<th>DCC and European</th>
<th>DCC and European Regional Development Fund</th>
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<tbody>
<tr>
<td>PARTNERS:</td>
<td>Dundee City Council, Urban Foresight, IBI Group</td>
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<tr>
<td>DESCRIPTION:</td>
<td>Promotion office for a Mobility Integration Living Laboratory</td>
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<tr>
<td>START/ END:</td>
<td>Autumn 2014 - 2020</td>
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<tr>
<td>ACTIVITIES:</td>
<td>• £1.4M project establishing a Living Lab in Dundee</td>
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<td>• Pursue existing funding proposals and attract new opportunities</td>
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<td>• Coordinate stakeholder activities</td>
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<td>• Promote Dundee as a location for trialing and developing new mobility integration solutions</td>
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**OVERVIEW**

ShareMORE

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<tr>
<th>FUNDING:</th>
<th>Scottish Enterprise</th>
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<tbody>
<tr>
<td>PARTNERS:</td>
<td>203020 Taxis, Carplus, Co-Wheels, Dundee City Council, IBI Group, Nissan, Route Monkey, SSE, Smart Parking, Urban Foresight</td>
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<tr>
<td>DESCRIPTION:</td>
<td>Demonstrate technologies, business models &amp; regulatory controls for a sharing city</td>
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<tr>
<td>START/ END:</td>
<td>2015 ongoing</td>
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<tr>
<td>ACTIVITIES:</td>
<td>Multi-modal sharing and electric taxis</td>
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<td></td>
<td>Optimising fleets for sharing and sharing municipal fleet vehicles</td>
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<td>Shared access parking</td>
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<td>Shared and open data</td>
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<td>Getting Transport Smart</td>
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DUNDEE – ONE OF EUROPE’S SMART TRAVEL CITIES

Thank You – Any Questions?
BUILDING A HYDROGEN ECONOMY IN SCOTLAND

Fiona Goodenough
Scottish Cities Alliance Hydrogen Project Manager

Fiona.goodenough@scottishcities.org.uk
SCOTTISH CITIES ALLIANCE (SCA)

• Partnership of the 7 Scottish Cities and Scottish Government.
• Delivering the Scottish Government’s ‘Agenda for Cities’.
• Collaborative working to maximise economic potential.
• Focus on innovative solutions and attracting investment.
• Environment to test out new ideas and business models.
• Operational plan priorities: Low Carbon; Hydrogen & Smart Cities
Electrolyser produces oxygen and hydrogen by splitting water

Fuel cell produces electricity from hydrogen

Gas network

Power grid

Cars

Forklifts

Buses

Shipping

Generator

Agriculture

Combined heat and Power

Power grid

Electricity from renewable sources

Power Grid

Hydrogen Storage
BUILDING A HYDROGEN ECONOMY IN SCOTLAND

Renewable Hydrogen generation

Hydrogen Refuelling Infrastructure deployment

Fuel cell bus fleet deployment

Council fleet FCEV deployment

Integrated Energy Solutions
HYDROGEN TRANSPORT

Clean energy vehicles and managing the transition to low-carbon transport - Hydrogen

- Building a Hydrogen Economy for Scotland
- Partners in the most ambitious pan-European H2 Transport Projects
- Developing Integrated Energy Projects – Power, Energy and Transport
- Developing projects to look at H2 for decarbonising heat and grid balancing
JIVE: Joint Initiative for hydrogen Vehicles across Europe

Objectives

Deploy 142 FC buses across nine cities
Achieve 30% cost reduction versus state of the art
Operate 50% of the vehicles for at least 36 months
Deploy the largest capacity HRS in Europe
Achieve near 100% reliability of HRS
Demonstrate technological readiness of FC buses and HRS
Encourage further uptake

UK – 56 FC buses
Denmark – 10 FC buses
Latvia – 10 FC buses
Germany – 51 FC buses
Italy – 15 FC buses

Fuel cell buses in cities participating in JIVE

Current FC buses
Future FC buses (Project JIVE)
Future FC buses (other projects)
Articulated bus (Project JIVE)

JIVE will be a six year project, with an anticipated start date of early 2017
A list of reserve cities* has been made. These cities will be able to take on funding and deploy buses in the event that a city has to withdraw from the project.
OUTCOMES

Commercialise Hydrogen Refuelling Infrastructure and Hydrogen Fuel Cell Buses by 2020
Hydrogen Fuel Cell Buses to be at a cost equivalent to diesel buses
No more Government subsidies by 2020
Increase H2 Bus Manufacturers
Increase H2 Fleet Vehicles
Tackle Inner City Air Quality Issues
Procurement Framework Agreements in place for any local authority to utilise
Career Development Opportunities
A NATION WITH AMBITION

- Programme for Government – 2017/2018

- Committed to the introduction of Low Emissions Zones across 4 of Scotland’s largest cities by 2020. The first one to be deployed in Glasgow by the end of 2018 and in all other Air Quality Management Areas by 2023.

- Phase out petrol and diesel vehicles by 2032 – 8 years before UK Government targets

- Take the lead in deployment of Ultra Low Emission Vehicles across all transport sectors

- Continuation of the Green Bus Fund

- Research and Development and Manufacturing

- Early adopters
DECARBONISATION

WE WILL PHASE OUT THE NEED FOR NEW PETROL AND DIESEL CARS AND VANS BY 2032

WE ARE COMMITTED TO SECURING FUTURE INVESTMENT IN CARBON CAPTURE STORAGE IN SCOTLAND

WE ARE WORKING WITH LOCAL AUTHORITIES TO INTRODUCE LOW EMISSIONS ZONES (LEZS) IN OUR FOUR BIGGEST CITIES
INTEGRATED ENERGY PARK - DUNDEE
BUILDING A HYDROGEN ECONOMY IN SCOTLAND

Working in partnership with Scottish Enterprise, Scotland’s national economic development agency – Hydrogen Fore sighting and SHFCA – Scotland’s Hydrogen Membership Association
LOW CARBON URBAN PLANNING

Regional Economic Strategy 2017-37

Tay Cities Deal Proposal 2017-2027:

- £1.83 billion investment
- £763 million contribution from Governments
- 15000 Jobs across the Tay Cities area.

Proposals to:

1) Deliver a 3-phase pipeline of Council-led projects - focusing on low carbon heating and low carbon transport.

2) Establish a regional ESCO (known as Tay Cities Energy Services Company).

Funding request of £95m (total project costs £180m)