

CITY OF CAPE TOWN ENERGY AND CLIMATE CHANGE ACTION PLAN

PROJECT INFORMATION

| KEY | High priority projects | Medium priority projects | Low / other projects |
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| OBJECTIVE 1. CITY-WIDE: 10% REDUCTION IN ELECTRICITY CONSUMPTION ON UNCONSTRAINED GROWTH BY 2012 (3.3%/annum 2010-2012) (see Objective 2: All growth to be in renewable energy supply, & Objective 8: Awareness) | | | |
| PROGRAMME & PROJECT INFO / STATUS | | | |
| Prog ID | Programme | Proj ID | Project |
| 1.1 | Electricity consumption reduction : mandatory | 1.1.1 | Power Conservation Programme rollout (driven by National Legislation) |
| 1.2 | Solar Water Heating | 1.2.1a | Mass roll out of solar water heaters, mid to high income - Request for Proposals |
| | | 1.2.1b | Mass roll out of solar water heaters - implementation |
| | | 1.2.2 | EE Water Heating Bylaw |
| 1.3 | Metering | 1.3.1 | Internet based metering - large customers / AMI / ERP |
| | | 1.3.2 | Ripple control - pilot (Utility load management - ULM) |
| | | 1.3.3 | Smart metering |
| | | 1.3.4 | Capital Meter Replacement / AMR |
| 1.4 | Limited electricity supply to new developments | 1.4.1 | Preparation of criteria for new development in the City and urban edge (also PCP requirement) |
| 1.5 | Green Building | 1.5.1 | Green Building Bylaw / Sust. Dev. requirements RFQ |
| 1.6 | Reduction in electricity theft | 1.6.1 | |
| OBJECTIVE 2. 10% RENEWABLE AND CLEANER ENERGY SUPPLY BY 2020; ALL GROWTH IN ELECTRICITY DEMAND TO BE MET BY CLEANER / RENEWABLE SUPPLY | | | |
| 2.1 | Renewable Energy large scale supply | 2.1.1 | Darling Power Purchase Agreement and sale of Green Electricity Certificates |
| | | 2.1.2 | Power Purchase Agreements with Independent Power Producers |
| | | 2.1.3 | REFIT for cities |
| | | 2.1.4 | Combined cycle generation from natural gas sources (eg. Kudu/Ibubhezi) |
| 2.2 | Electricity generation from municipal operations | 2.2.1 | Anaerobic digestion phase1 - methane yield assessment |
| | | 2.2.2 | Anaerobic digestion phase2 - Conceptual design of dry fermenter and associated economics |
| | | 2.2.3 | Anaerobic digestion phase 3 - Pilot dry fermentation & aerobic composting |
| | | 2.2.4 | Anaerobic digestion - Pilot wet fermentation |
| | | 2.2.5 | Waste oil collection for biodiesel production assessment (R&D) |
| | | 2.2.6 | Refuse Derived Fuel (RDF) & gasification study |
| | | 2.2.7 | Cleaner production assessment |
| | | 2.2.8 | Landfill gas project - CEF partnership negotiations |
| | | 2.2.9 | Funding towards advanced waste management programme |
| | | 2.2.10 | Methane production from waste water sludge + organic solid waste |
| | | 2.2.11 | Micro-hydro on potable waterflows: Research & Development |
| | | 2.2.12 | Microhydro pilot - Green Point Park |
| 2.3 | Renewable energy supply at Eskom rates to City | 2.3.1 | Renewable Energy - Preparation of an RFP |
| 2.4 | Renewable Energy small scale supply | 2.4.1 | Small wind turbines - commercial / industrial applications - development of technical specs for grid connection |
| | | 2.4.2 | Micro-wind turbine building regulations / zoning |
| 2.5 | Renewable Energy and Energy supply diversification Plan | 2.5.1 | |
| OBJECTIVE 3. COUNCIL OPERATIONS: 10% REDUCTION IN ENERGY CONSUMPTION ON UNCONSTRAINED GROWTH BY 2012 (3.3% / annum 2010-2012) ; all growth in demand to be met by renewable/cleaner energy supply | | | |
| 3.1 | Buildings retrofit | 3.1.1 | 3 Municipal buildings |
| | | 3.1.2 | 1 Municipal building |
| | | 3.1.3 | Additional lighting control Cape Town Stadium |
| | | 3.1.4 a | Civic retrofit - audit |
| | | 3.1.4 b | Civic retrofit - implement |
| | | 3.1.5 | CCT Libraries retrofit |
| 3.2 | Upgrade existing CCT rental stock (CRU) - Phase 1 | 3.1.6 | CCT Clinics |
| | | 3.2.1 | <u>Ceilings:</u> • Install rhinoboard ceilings where none have been installed • Insulate all ceilings with thermal insulation |
| | | 3.2.2 | <u>Lights:</u> • Change all element light bulbs to compact fluorescent bulbs • Replace high mast lighting with building-mounted flood lights |
| | | 3.2.3 | <u>Water heating:</u> • Limit hot water cylinders to 100l capacity and set thermostat to 50°C • Educate users on calculating expected cost of water heating • Insulate new hot water pipe runs |
| 3.2.4 | <u>Water efficiency:</u> • Install low-flow efficient shower heads • Replace existing cisterns with multiflush cisterns where viable • Replace bulk water meters with individual water management devices, preferably preset to 350l / day • Install permeable paving to reduce run-off • Tree planting using indigenous water-wise plants | | |

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| | | 3.2.5 | Thermal efficiency of house: • Service all windows and doors for draft minimisation |
| | | 3.2.6 | Food Security: • Encourage development of food gardens (where evidence of interest from community) |
| | | 3.2.7 | Environmental Health / Risk Reduction: • Provide dedicated, properly managed refuse collection / removal areas |
| 3.3 | Greening the City Procurement Policy | 3.3.1 | Development of the Greened SCM Policy |
| | | 3.3.2 | Development of the Greening Procedural document for the SCM Policy |
| 3.4 | Energy efficient technologies DoRA funding | 3.4.1 | Intervention projects still to be chosen and BPs developed, also see 3.6.2 |
| 3.5 | Energy Efficient pumps | 3.5.1 | EE water pumps (R & D) |
| | | 3.5.2 | EE sewage pumps |
| 3.6 | Street and traffic lighting retrofit | 3.6.1 | City wide street light retrofit |
| | | 3.6.2 | DoRA funded street light retrofit |
| | | 3.6.3 | 2010 protocol area street light retrofit |
| | | 3.6.4 | City wide traffic light retrofit |
| | | 3.6.5 | 2010 protocol area traffic light retrofit |
| 3.7 | Water supply efficiency | 3.7.1 | Water efficiency: reduces need for pumping |
| | | 3.7.2 | Gravity fed water supply - Green Point Precinct |
| 3.8 | Greening the City's Fleet | 3.8.1 | Green Fleet Programme development |
| | | 3.8.2 | Greening the Electricity Fleet |
| | | 3.8.3 | Greening Utility Department's fleets |
| | | 3.8.4 | Fuel Efficiency Campaign |
| | | 3.8.5 | Eco Driver Training Pilot Project |
| 3.9 | Video conferencing facilities for CCT | 3.9.1 | |
| OBJECTIVE 4. COMPACT RESOURCE EFFICIENT CITY DEVELOPMENT | | | |
| 4.1 | Spatial Development Framework Plan | 4.1.1 | Densification Policy/Implementation Mechanisms |
| | | 4.1.2 | Development Edges Policy - Urban and Coastal Edges |
| | | 4.1.3 | District Spatial Development Plans and Environmental Management Frameworks |
| 4.2 | Densification around railway stations (PRASA) | 4.2.1 | |
| 4.3 | WTPD Planning for a low carbon city | 4.3.1 | Conference - partnership with SEA & InWENT |
| OBJECTIVE 5. SUSTAINABLE TRANSPORT SYSTEM | | | |
| 5.1 | Integrated Rapid Transit System (IRT) | 5.1.1 | Roll out IRT |
| | | 5.1.2 | CDM (Clean Development Mechanism) Application for IRT |
| 5.2 | Non-Motorised Transport (NMT): | 5.2.1 | Klipfontein Corridor |
| | | 5.2.2 | Inner City |
| | | 5.2.3 | IRT Phase 1A_NMT |
| | | 5.2.4 | City Wide NMT |
| 5.3 | Travel Demand Management | 5.3.1 | Park & Ride |
| | | 5.3.2 | Large Employer Programme |
| OBJECTIVE 6. ADAPTING TO AND BUILDING RESILIENCE TO CLIMATE CHANGE IMPACTS (CITY-WIDE) | | | |
| 6.1 | CCT Climate Adaptation Plan of Action (CAPA) | 6.1.1 a | CAPA Review |
| | | 6.1.1.b | CAPA Revision |
| | | 6.1.2 | Coastal Protection Zone |
| | | 6.1.3 | Legal Review |
| | | 6.1.4 | Food Security |
| | | 6.1.5 | Water security |
| 6.2 | Incorporation of CAPA outputs | 6.2.1 | Development approvals wrt Climate Change |
| 6.3 | MOSS Strategy | 6.3.1 | |
| OBJECTIVE 7. MORE RESILIENT LOW INCOME / VULNERABLE COMMUNITIES | | | |
| 7.1 | Low income energy efficient housing | 7.1.1 | Energy Efficient Housing - Edward Road |
| | | 7.1.2 | Kuyasa EE housing implementation |
| | | 7.1.3 | Kuyasa EE houses |
| 7.2 | Low income housing: Greening | 7.2.1 | Greening Tafelsig TA2 housing units |
| | | 7.2.2 | Greening Kew Town |
| | | 7.2.3 | Greening Wesbank |
| | | 7.2.4 | Greening Witsands |
| 7.3 | Low income housing: Ceilings | 7.3.1 | Retrofitting low income houses (Mamre) with ceilings |
| | | 7.3.2 | Retrofitting low income houses with ceilings |
| 7.4 | Low income housing: Solar Water Heaters (SWH) | 7.4.1 | Retrofitting low income houses with SWH |
| 7.5 | Free Basic Electricity rollout | 7.5.1 | |
| OBJECTIVE 8. DEVELOPMENT OF PROJECT CARBON SALES POTENTIAL | | | |
| 8.1 | Carbon trading scoping and development | 8.1.1 | Carbon Projects Scoping Assessment |
| | | 8.1.2 | Carbon sales policy |
| 8.2 | Carbon trading capacity development | 8.2.1 | Carbon sales training |
| | | 8.2.2 | Carbon Finance Capacity Building |

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| 8.3 | Carbon sales | 8.3 | Carbon register |
| | | 8.3.2 | Kuyasa CDM project - carbon sales |
| OBJECTIVE 9. LOCAL ECONOMIC DEVELOPMENT IN THE ENERGY SECTOR | | | |
| 9.1 | Renewable energy business in Cape Town: Study | 9.1.1 | |
| 9.2 | Establishment of Renewable Energy SPV: WC/CCT | 9.2.1 | |
| OBJECTIVE 10. ENERGY & CLIMATE CHANGE COMMUNICATION AND EDUCATION PROGRAMMES | | | |
| 10.1 | Electricity Saving Campaign | 10.1.1 | Social Research and Development of Electr Saving Campaign Strategy |
| | | 10.1.2 | Electr Saving Campaign rollout |
| | | 10.1.3 | Social marketing electr savings campaign |
| 10.2 | Energy Efficiency Forum for Commercial Buildings | 10.2.1 | |
| 10.3 | Schools / Youth / Citizens | 10.3.1 | Green Schools Audit |
| | | 10.3.2 | Education & Capacity Building - Climate Change Adaptation and Mitigation |
| | | 10.3.3 | Education & Capacity Building - Energy efficiency and resource conservation |
| | | 10.3.4 | Audio visual training video |
| 10.4 | Smart Living campaign | 10.4.1 | Smart Living corporate campaign |
| | | 10.4.2 | Smart Living pilot programme |
| | | 10.4.3 | Smart Living Handbook |
| 10.5 | Staff training CCT | 10.5.1 | Development of training material for staff training |
| 10.6 | Enviroworks | 10.6.1 | Bi-annual environmental newsletter of the City of Cape Town |
| 10.7 | Green Building Guidelines | 10.7.1 | |
| 10.8 | Resource efficiency campaign | 10.8.1 | Resource efficiency campaign for whole City |
| OVERALL. ENERGY & CLIMATE CHANGE RESEARCH AND DEVELOPMENT; MONITORING AND EVALUATION | | | |
| 11.1 | Energy and Climate Change: Research and Development | 11.1.1 | Climate Change Think Tank - Mitigation and Adaptation Research & Development |
| | | 11.1.2 | Low Carbon Zone Project WWF |
| 11.2 | Energy data management, monitoring and evaluation | 11.2.1 | CoCT Energy Management System |
| | | 11.2.2 | Pilot Project: Electricity consumption of City Buildings |
| | | 11.2.3 | Atmospheric carbon measurement |
| 11.3 | Air Quality Management Plan | 11.3.1 | Air Quality - Emissions database |
| | | 11.3.2 | VOC |
| | | 11.3.3 | Vehicle emissions |
| 11.4 | Statutory/Policy Linkages and Alignment | 11.4.1 | IDP SFA 3 |
| | | 11.4.2 | IMEP Agenda - development of business plans |