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National Programme for Turkey 2013 –  
Instrument for Pre-Accession Assistance

# **Technical Assistance for Developed Analytical Basis for Formulating Strategies and Actions Towards Low Carbon Development**

**Project Identification No: EuropeAid/136032/IH/SER/TR**

**Contract No: TR2013/0327.05.01-01/001**

## **Component 3 – Briefing on Consultation Meeting with Buildings Sector's Stakeholders**

**Ankara 2018**



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## Abbreviations

LCDTR	Technical Assistance for Developed Analytical Basis for Formulating Strategies and Actions Towards Low Carbon Development
MENR	Ministry of Energy and Natural Resources
MoEU	Ministry of Environment and Urbanization (Beneficiary)
TAT	Technical Assistance Team
TurkStat	Turkish Statistical Institution



## 1. Summary of the Meeting

<b>Project Name</b>	Technical Assistance for Developed Analytical Basis for Formulating Strategies and Actions towards Low Carbon Development	
<b>Project Number</b>	TR2013/0327.05.01-01/001	
<b>Date and Hour</b>	01.11.2018, 14:30	
<b>Location</b>	MENR premises, Ankara, Turkey	
<b>Name of the Meeting</b>	Consultation Meeting with MENR for Building Sector	
<b>Participants</b>	Ministry of Energy and Natural Resource (MENR)	Engin İlseven – Head of Energy Statistics Department Ali Osman Kılınçaslan – Deputy Head of Environment and Climate Department Ümit Çalikoğlu – Expert Aslı Oğuz – Environmental Engineer Halil Oruç – Assistant Expert
	Ministry of Environment and Urbanization (MoEU)	Volkan Polat –Expert
	Technical Assistance Team (TAT)	Mykola Raptun – Team Leader Aynur Tokel – Senior Statistics, Data and Sector Liaison Expert Erdoğan Ersoy – Project Expert Teksin Öztekin – Project Translator
	Project Sectoral Expert(s)	Gülfem İnaner – Senior Building Sector Expert

## 2. Agenda

- Opening speech
- Introduction to the project
- Information on Component 3
- Data needs in the scope of component 3
- Discussion and assessment of GHG mitigation actions and data needs
- Participants from stakeholders to working group 3&4 activities

Mr. Ali Osman Kılınçaslan, on behalf of the MENR, welcomed all the participants

Mr. Rapsun, the project Team Leader (TL), introduce LCDTR project and Component 3 activities. He gave information on;

- Project overall objectives and purpose
- Project stakeholders and target groups
- Project consortium
- Expected results of the project
- Brief information on project components 1-4
- GHG mitigation actions selection process as part of the component 3 activities, and suggested mitigation actions for the building sector

After Mr. Rapsun's presentation, Mrs. Aynur Tokel, senior expert, gave information on data needs for the building sector.

Please see Annex 1 for detailed presentation.

Mr. Kılınçaslan asked whether the TIMES modelling to be the continuation work of the previous content that was built for the preparation of Turkey's INDC.

Mr. Rapsun and Mrs. Tokel explained that LCDTR project will be focusing on 4 sectors; building, waste, agriculture and transport sectors only.

Mr İlseven, stated that fuel prices data is sent to International Energy Agency (IEA) annually and those data can be used for LCDTR project. He also explained that there is no fuel price projection within the Ministry. World Bank, IEA has some fuel price projection under 4 fuel price scenario. He suggested using at least 2 fuel price scenario figures from IEA projection for the cost assessment of GHG mitigation actions under LCDTR project.

Mr. Rapsun explained that the target is to use reasonable range in fuel price in this project.

Mr. Halil Oruç from Energy Efficiency Department informed the participants on energy consumption data availability within the Ministry. He informed that they are collecting



energy consumption data from industrial establishments of which energy consumption > 1000 Toe,

public administration buildings of which energy consumption > 250 Toe

Private buildings of which energy consumption > 500 Toe or construction area >20000 m<sup>2</sup>

He emphasized that the share of heating in total energy consumption is more than 50% but the share of electrical equipment also increasing. He also informed the participants about the Energy Efficiency Action Plan published in December 2017, which includes 11 actions related to buildings. The target is 20.9 MToE energy saving by implementing those 11 actions. In addition, he mentioned about UNDP project on Improving Energy Efficiency in Buildings performed in 2011-2017 in Turkey informing that 166 public buildings were studied in that project.

Mr. Raptsun underlining the importance of the collaboration of stakeholder institutions, he also stated that the project team will be happy to continue to work with the Ministry of Energy in close relations on data sharing. He thanked all the representatives of the Ministry for their interest and valuable contributions.



ANNEX  
Presentation(s)



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Technical Assistance for Developed Analytical Basis for  
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# LCDTR - introduction to the Project and Component 3

Dr. Mykola Raptun  
Team Leader

November 2018, Ankara



REPUBLIC OF TURKEY  
MINISTRY OF ENVIRONMENT  
AND URBANISATION

# Project's Overall Objective and Purpose

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**Project title:** *Technical Assistance for Developed Analytical Basis for Formulating Strategies and Actions towards Low Carbon Development*

This project is co-financed by the European Union and the Republic of Turkey

**Overall objective:** To reduce anthropogenic GHG emissions to contribute to the global efforts to mitigate climate change in line with the scientific evidence

**Purpose:** To increase national and local capacity to prepare for medium and long term climate action towards climate resilient low-carbon development, which will gradually align with EU climate policy and legislation by providing an analytical basis to support realisation of low carbon in the long-term, specifically focusing on cost-effective climate change mitigation actions related to building, waste, transportation and agriculture sectors of the National Climate Change Action Plan (NCCAP)

**Period of implementation:** 36 months (June 2017 – May 2020)

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# Project Stakeholders and Target Groups

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- **Ministry of Environment and Urbanisation –Beneficiary**
  - **Central Finance and Contracts Unit (CFCU) - Contracting Authority**
  - **Ministry of Energy and Natural Resources**
  - **Ministry of Agriculture and Forestry**
  - **Ministry of Transportation and Infrastructure**
  - **Ministry of Foreign Affairs**
  - **Coordination Board on Climate Change and Air Management**
  - **Turkish Statistical Institute**
  - **Local level governmental institutions**
  - **NGOs and private sector - with focus on the key sectors of buildings, transport, waste and agriculture**
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# Project Consortium



**Consortium Leader - Human Dynamics**, is a leading provider of premium public sector consulting services

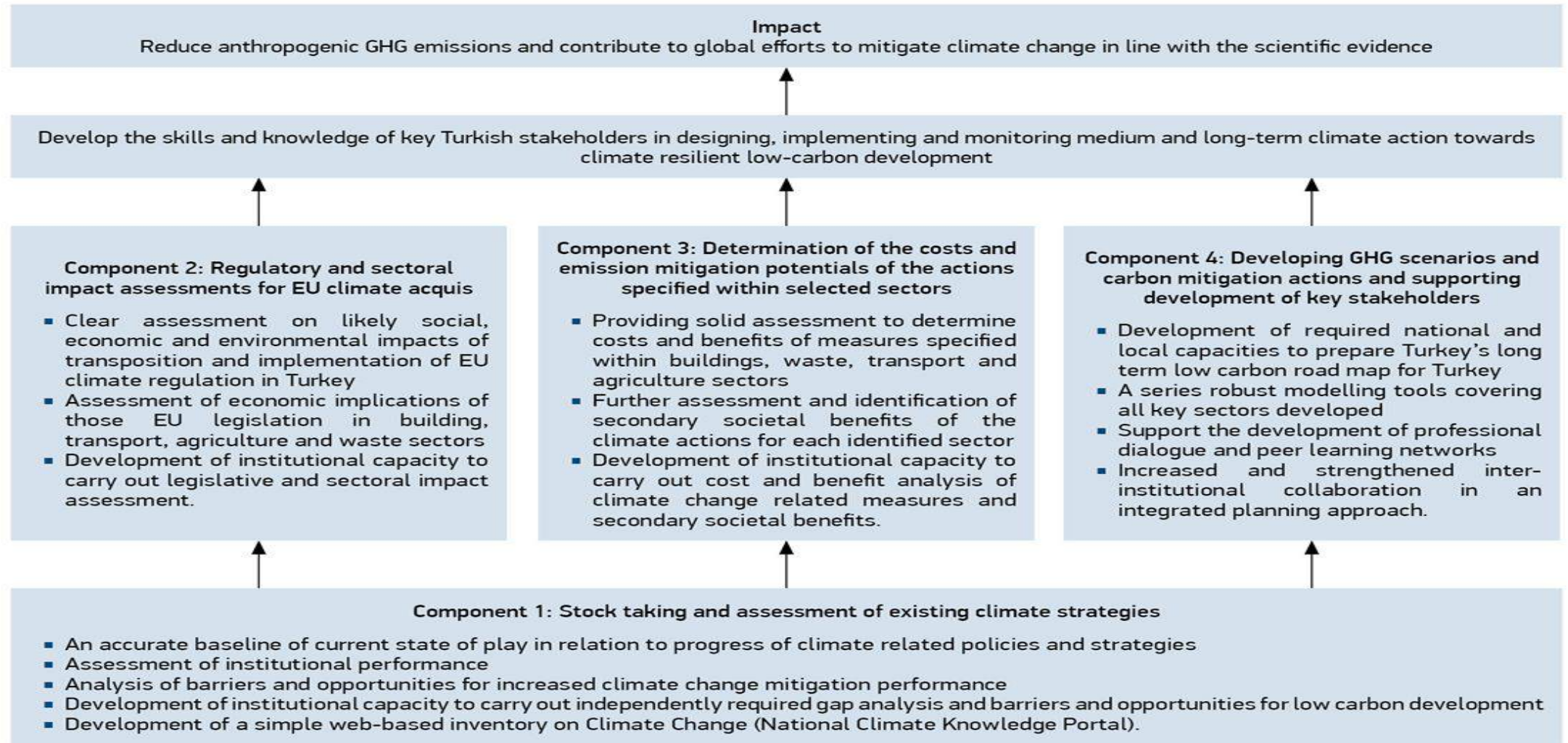


**The Regional Environmental Centre for Central and Eastern Europe (REC)** is an international organisation with a mission to assist in addressing environmental issues



**Agriconsulting Europe S.A. (AESAs)**, is a leading international development consulting firm that has been in operation since 1994.

# Expected results



# Component 1: *Stock taking and assessment of existing climate strategies (1)*

ACTIVITY, REPORT	CONTENT
<p><b>Activity 1.1.1</b> Review and analysis of the status of the climate related strategies policies, plans, and legislation (Status Report, 105 p.)</p>	<ul style="list-style-type: none"> <li>▪ Introduction</li> <li>▪ GHG Emission for Turkey: Trends and Projections</li> <li>▪ Setting Macroeconomic Outlook for Predefined Term (2053)</li> <li>▪ Review of Existing Turkish Legal and Political Framework on Climate Action and Low Carbon Development</li> <li>▪ Conclusions, Recommendations and Inputs for Further Analysis</li> </ul>
<p><b>Activity 1.1.2</b> Identification of the sectoral development policies intended to meet the GHG emissions reduction targets (Demand Status Report, 91 p.)</p>	<ul style="list-style-type: none"> <li>▪ Introduction</li> <li>▪ Development Policies and GHG Emission Reduction Targets in Buildings Sector</li> <li>▪ Development Policies and GHG Emission Reduction Targets in Waste Sector</li> <li>▪ Development Policies and GHG Emission Reduction Targets in Transportation Sector</li> <li>▪ Development Policies and GHG Emission Reduction Targets in Agriculture Sector</li> <li>▪ Conclusions and Recommendations</li> </ul>
<p><b>Activity 1.2</b> Legislative and institutional gap analysis to improve low carbon development and climate change mitigation performance (Gap Analysis Report, 133 p.)</p>	<ul style="list-style-type: none"> <li>▪ Introduction</li> <li>▪ Legal Framework for Low Carbon Development</li> <li>▪ Political and Legislative Gap Analysis</li> <li>▪ Governance and Institutional Framework for Low Carbon Development</li> <li>▪ Conclusions and Recommendations</li> </ul>

# Component 1: *Stock taking and assessment of existing climate strategies (2)*

<p><b>Activity 1.3</b> Identification and analysis of the political, financial, institutional and technological barriers and opportunities for low carbon development (Barriers and Opportunities Report, 143 p.)</p>	<ul style="list-style-type: none"><li>▪ Introduction</li><li>▪ Analysis of Cross-cutting Barriers and Opportunities in Turkey</li><li>▪ Analysis of Barriers and Opportunities in Buildings Sector</li><li>▪ Analysis of Barriers and Opportunities in Waste Sector</li><li>▪ Analysis of Barriers and Opportunities in Transportation Sector</li><li>▪ Analysis of Barriers and Opportunities in Agriculture Sector</li><li>▪ Conclusions and Recommendations</li></ul>
<p><b>Activity 1.1-1.3</b> Four summarised and collated reports (Consolidated Baseline Report, 161 p.)</p>	<ul style="list-style-type: none"><li>▪ Executive Summary</li><li>▪ Introduction</li><li>▪ Status Report – Review of Existing Strategies Related to Climate Change</li><li>▪ Demand Status Report - Review of the Sectoral Development Objectives and Policies in Relation to GHG Emission Reduction Commitments for Agriculture, Buildings, Transport, and Waste Sectors</li><li>▪ Gap Analysis Report – Identification and Assessment of the Political, Legislative, Institutional and Governance Gaps towards LCD</li><li>▪ Barriers and Opportunities Report – Identifying and Analysing the Problems, Lock-ins and Solutions towards LCD</li><li>▪ Conclusion</li></ul>

The reports can be downloaded from the project's website:  
<http://www.lowcarbonturkey.org/technical-reports/>

## **Component 2: *Regulatory and sectoral impact assessments for EU climate acquis***

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**2.1 Four Regulatory Impact Assessment Reports (RIAs)** for the EU climate acquis (Emission Trading, Effort Sharing Decision, Carbon Capture and Storage, and Fuel Quality Directives) to be transposed into the national legislation. Assessments will identify and describe the problems to be addressed, establish objectives, formulate policy options and assess the impacts of this options

**2.2 Sectoral Impact Assessment Reports (Building, Transport, Waste and Agriculture)** – to analyse positive and negative impacts of the EU climate acquis on sectoral competitiveness, access to markets, public procurement, etc.

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## ***Component 3: Determination of the costs and emission mitigation potentials of the actions specified within the buildings, waste, transport and agriculture sectors of the NCCAP and other policy documents***

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**3.1 Assess the GHG emission mitigation potentials of at least ten actions in the focus sectors (buildings, waste, transport and agriculture ) of the project**

**3.2 Assess the financial costs and benefits of the actions analysed in activity 3.1**

**3.3 Identify and analyse other potential positive and negative non-financial societal gains and losses of the analysed mitigation actions**

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## **Component 4: *Developing GHG scenarios and carbon mitigation actions and supporting development of key stakeholders***

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**4.1 Carry out GHG scenario modelling for focus sectors of the project**

**4.2 Identify carbon mitigation activities entailing significant benefits to Turkey with a perspective to reconcile climate, growth, and energy security in the selected sectors**

**4.3 Capacity building for key stakeholders (training, coaching and mentoring services, study visits)**

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# Strategic principles of the Project implementation

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**Principle 1: Results-orientated, solution-driven approach**

**Principle 2: Promoting dialogue and collaboration with relevant stakeholders from the public, private and non-governmental sector**

**Principle 3: Deep understanding of the sectoral and local situation**

**Principle 4: Prioritizing capacity development**

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# Participatory approach to policy & strategy analysis



## Component 3: identification and selection of the actions for GHG mitigation potentials and costs assessment

Phase  
1

- Preliminary sectoral GHG mitigation actions screening and evaluation

Phase  
2

- Consultations with the project stakeholders

Phase  
3

- Selection of the actions (at least 10) for GHG mitigation potentials and costs assessment

# Criteria for GHG mitigation actions selection

- Belong to four project target sectors - transport, buildings, agriculture and waste
- Included in NCCAP and/or other governmental strategic documents
- Cost effectiveness
- High potential for GHG emission reduction
- Other non-financial societal criteria – social, economic, environmental, etc.

# Sectoral GHG emissions in 1990 and 2016

Sector	GHG Emissions (kt CO <sub>2</sub> -eq)		GHG Emissions in total (%)	
	1990	2016	1990	2016
<b>Transport Sector</b>	26968.90	81841.20	12.8	16.5
<b>Buildings Sector</b>	27215.06	56837.30	12.9	11.5
<b>Agriculture Sector</b>	42402.30	56485.70	20.1	11.4
<b>Waste Sector</b>	11090.59	16181.19	5.3	3.3
<b>Total for 4 Sectors</b>	107676.85	211345.39	51.1	42.6

# Buildings sector: actions suggested based on preliminary screening

Suggested actions for Buildings sector	Selection Criteria		
	Including in National Climate Change Action Plan (NCCAP)	Cost Effectiveness* (EUR/tCO2)	Mitigation Potential* (MtCO2)
Increasing usage rate of energy efficient appliances in buildings (higher than A+)	√	-205	0.9
Improving energy performance of existing buildings(improved insulation and energy-efficient windows)	√	-152 to -157	4.5 to 11.2
Energy efficient buildings - heating and cooling system	√	-300** (for cooling) -42 to -106 (for heating)	1.0 (for cooling) 1.2 to 6.9 (for heating)
Dissemination of green building, passive building and nearly zero energy building applications	√	?	?
Fuel shifting in buildings from high emission intensity to low (renewable energy)	√	?	?
Increasing usage rate of LED lighting system in buildings	√	-300	1.0

\* Abatement cost and potential values are taken from, “The Demand for GHG emissions Reductions: An investors’ MACC for Turkey, prepared for EBRD” report as reference.

# Data Needs-General Information

## Data needs

## Possible data source

- Population, population growth rate

TurkStat

- GDP, GDP growth rate

Directorate of Strategy  
and Budget ?,  
TurkStat

- Sectoral growth rate

?

- Complete Energy balance table
- Sectoral Energy Consumption
- Fuel prices and projections

Ministry of Energy and  
Natural Resources  
(MENR)

# Data Needs-Building Sector

Data needs	Possible data source
Current building stock specifications; number of dwelling, household per dwelling, insulation status, future building stocks expectations etc.	TurkStat
Commercial building specifications	TurkStat
Political baseline projections (coal, natural gas, cogeneration, solar penetration etc.)	Ministry of Energy and Natural Resources (MENR)
Building directives and their corresponding energy consumptions etc.	MENR Ministry of Environment and Urbanisation
Demands (water heating, space heating, refrigeration etc.)	?



# GHG mitigation scenario development frameworks

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- “No regrets”/”win-win” scenarios (cost-effective actions only)
  - Limited costs scenarios - actions up to a certain cost per unit of emissions reduction
  - Emission reduction target based scenarios (including INDC, NCCAP, and others)
    - Mitigation relative to the baseline,
    - Mitigation relative to emissions in some historical year,
    - Mitigation relative to some indicator such as CO<sub>2</sub>/capita or CO<sub>2</sub>/\$
  - Scenarios which include specific measures or technologies selected because of their perceived economic, social , and technical feasibility.
-

# LCDTR – expected impacts in Turkey

Implementation of the LCDTR's capacity building activities will facilitate:

- Harmonization to EU climate change legislation (EU climate acquis) and Complying with UN Sustainable Development Goals
- Reduction of environmental pollution from using fossil fuels (CO<sub>2</sub> co-pollutants - sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>))
- Attraction of investments in energy efficiency and renewable energy
- Support of jobs growth in hi-tech industries (photovoltaics, high capacity batteries, smart grid technologies, etc.)
- Decrease of country's dependency on fossil fuel import (net import in 2015 was 103.6 Mtoe and total energy supply - 128.8 Mtoe (IEA))



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## Thank you for your attention!

<http://www.lowcarbonturkey.org/>



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