

## **Economic Congress of the Second Century**



**Izmir City Council and Climate Change**  
Att. Nilay Kökkilinc- Izmir City Council President

**The Only Way To Become An Energy Exporter: Green Hydrogen**  
Huseyin DEVRIM- Metallurgical and Materials Engineer, General Manager of Teksis Advanced

**Onur Enerji Sustainable Energy Efficiency and  
Cost and Carbon Reduction Studies**  
Onur GUNDURU- Computer Engineer Onur Energy CEO





"Young people, you are the ones who strengthen and sustain our courage. With the upbringing and wisdom you are receiving, you will be the most precious example of humanity and civilization, love of country and freedom of thought. The rising new generation, you are the future. We builded the republic, you are the ones who raise it and keep it alive."

*H. Otatinsk*

Tunc SOYER

Mayor of Izmir Metropolitan Municipality

## In the Light of Science and With Common Sense

Dear Izmirians,

At a time when we see the light at the end of the tunnel for our country, we are also aware that there are serious problems facing us. The fact that economic problems have reached an unbearable level for our citizens and that we have experienced a great disaster as a country tells us that it is now an obligation to manage our country in the light of science and with a common mind.

In such an atmosphere, our Izmir held the Izmir Economy Congress of the second century. At the end of this process, in which we recorded the future expectations of all segments of the society, the Izmir Economy Congress, which we held with great care and to guide the future of Türkiye, went down in history as a light of enlightenment for the future of our country.

In this context, I would like to thank all the people and institutions who participated and contributed to the Izmir Economics Congress, which is a source of pride for us.



On the other hand, I would like to talk about the work done by the Izmir Metropolitan Municipality employees, who worked hard in the disaster area, where the beautiful people of Izmir provided great support with their magnanimity, and I would like to thank my colleagues. With their work and solidarity that make us all proud, they set an example for everyone with the solidarity they showed to our citizens in the region who were badly injured in the earthquake.

There is one very basic thing that all this shows us: we must live more in harmony with nature, without being stubborn with it.

For this reason, we must both establish resilient cities and take measures against the climate crisis that we are experiencing intensely. In the new issue of Izenergy magazine, you can find the opportunity to examine what kind of work the Izmir Metropolitan Municipality has done against the climate crisis.

With the belief that the days when we will meet with a more beautiful and more harmonious political understanding are very close...

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## A. Ercan TURKOGLU Engineer, M.Sc.

IZENERGY INC  
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### Dear Izmirians;

We are happy to bring you the 11th issue of our company's sectoral magazine, IZENERGY.

With the innovative management approach of our President, Mr. Tunc Soyer; as IZENERGY, we continue to carry out our projects on renewable energy sources and combating climate change.

In our magazine, we aimed to convey this valuable information to you by including our politicians, professional chambers, NGOs and other stakeholders who develop policies in our field of activity.

In our 11th issue, in our political perspective, the esteemed Izmir City Council President, Att. Nilay Kokkılınç's article titled Izmir City Council and Climate Change.

In our voice of the industry department, Teksis Advanced Technologies General Manager Mr. Huseyin Devrim reaches you with his article titled "The Only Way to Become an Energy Exporter: Green Hydrogen".

In our solution partner department, Onur Enerji CEO Mr. Onur Gunduru's article titled Onur Energy Sustainable Energy Efficiency and Cost and Carbon Reduction Studies is included.

Important resources showing how we are dealing with the climate crisis we are facing today and in the future;



Our sections covering the IMM Izmir Sustainable Energy and Climate Action Plan, IMM Izmir Green City Action Plan, IMM Izmir's Life in Harmony with Nature Strategy and IMM Plastic Waste-Free City Action Plan reach you in this issue as well.

Again, in this issue, Head of Climate Change and Zero Waste Department, Mr. Kemal Kılıç's article titled Izmir Green City Action Plan and Izmir Sustainable Energy and Climate Action Plan Process.

The point we have reached in the EU Climate Neutral and Smart Cities Mission, which we coordinate in Izmir, is a clear indication of the cooperation we carry out with all the stakeholders of the city. SECAP preparation studies in all district municipalities that will set an example for Türkiye also support the mission studies.

Thanks to the efforts of all our dedicated, disciplined and diligent staff in their fields; our company continues to expand its activities day by day.

We aim to be a pioneer in the renewable energy sector with our company IZGUNES INC, whose establishment we announced in our 10th issue. Our projects that we have implemented with the ESCO model are presented to you in this issue.

The 11th issue of our magazine is once again full of titles that raise our hopes for the future. We are proud to be able to convey our beautiful works to you, our esteemed readers.

To the beautiful days when the enthusiasm of spring is fully experienced...

## Izmir City Council and Climate Change

ATT. Nilay Kokkilinc

Izmir City Council President



Considering the natural events we have been experiencing in recent years, the climate change crises we have encountered and their negative effects on life, we can clearly say that climate change is one of the reasons that cause important global environmental problems of the 21st century.



At this very point, we can say that the first thing that comes to mind when social responsibility is mentioned, non-governmental organizations, an indispensable element of modern society, have a serious responsibility in raising the awareness of the society about climate change. As a matter of fact, it is undeniable that the City Councils, which have taken their place in city life legally on the scale of our country since 2005, have an important share in this responsibility as an umbrella organization of non-governmental organizations.

Izmir City Council, which has a history of twelve years today; In addition to its component, which operates with a budget transferred from the Izmir Metropolitan Municipality participatory democracy, and with

the same support, the elected representatives of the Governorate and Izmir Metropolitan Municipality, bar association, trade unions, universities, professional chambers, notary public offices, mukhtars, women/youth /children/disabled assemblies, as well as twenty-seven working groups, including groups working on climate change and the environment, are a non-governmental parent organization that makes efforts on a voluntary basis, including individual volunteers. The most important feature that distinguishes the Izmir City Council, which we can describe as a good tool for raising awareness on climate change with its inclusive feature, is that it has the right and authority to bring proposals to the municipal councils that will result in a "decision of the assembly" on every issue.

That's why; many international organizations, especially the United Nations, play an important role in the global struggle of cities and of course countries with climate change, with their effective work in this field. The organizations draw attention to the importance of the issue by emphasizing raising social awareness as well as institutional, scientific and political approaches in solving environmental problems.







o recycling and waste, and to all stakeholders who have an impact, through our components and volunteers, we are working to adapt the approaches to the environment to the conditions. Being aware of the responsibility we have undertaken, in addition to the awareness studies we have been carrying out regarding the positive effects of renewable energy sources on climate change, we will continue to struggle with the environmental problems created by climate change



together with all our components, with greater effort and care, with all our components. We express that we will continue, and we consider it our duty to make the following call to all our citizens who are sensitive to urban problems.

**“Join, let's manage together.”**

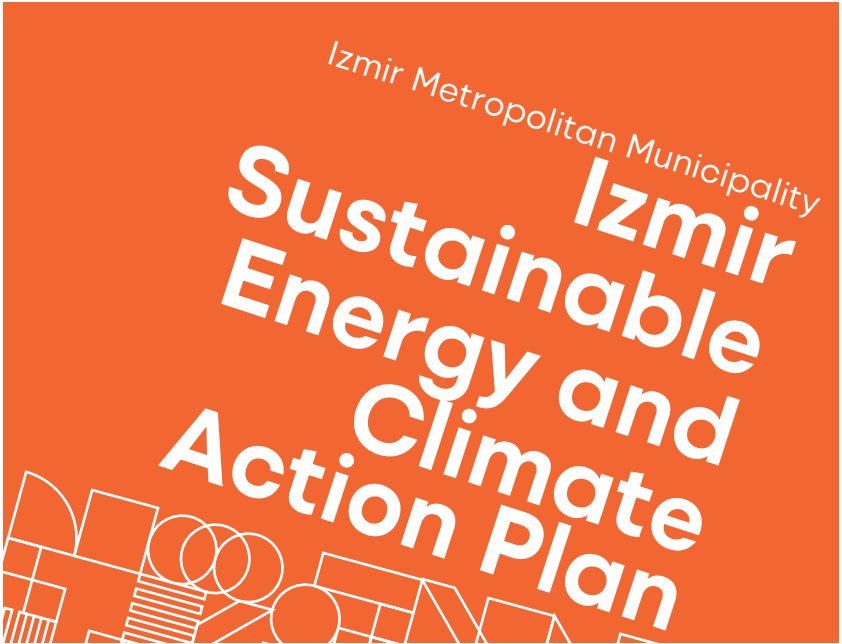
We know that in the fight against the crises created by climate change, the choices that the society will make in energy use are as important as what the society needs to know. In this context, although we accept that the social responsibility activity area that we can count in the first place for non-governmental organizations is awareness activities, we must say that the coordination of solidarity in disasters caused by natural events caused by climate change is just as important. Again, monitoring the central administration and local administrations to produce policies sensitive to climate change and services in accordance with international agreements, and directly participating in the city administrations based on the principles of participatory democracy, is another important point for civil society. In order to reduce the negative effects of climate change and to manage the crises created by climate change, how non-governmental organizations can contribute more to the political and local authority in the process of creating effective climate change policies by central and local governments. We would like to draw attention to the importance of the determination as in international examples.

**“Spring, productive summer, autumn, furious winter; They put on each other's clothes. The world is stunned, it doesn't know which is which. “**

This artistic expression of William Shakespeare enlightens us as the most beautiful artistic reflection of the process of climate change, which we are talking about, from past to present.

As Izmir City Council, to inform the society and all stakeholders who have an impact on the climate change crisis, from production to agriculture, from transportation to consumption, from saving, to increasing the use of clean and renewable energy,





It is an exact excerpt from the Sustainable Energy and Climate Action Plan (SECAP), which includes greenhouse gas reduction and adaptation actions to the effects of climate change, supported by The European Bank for Reconstruction and Development (EBRD), which is one of the works of the Izmir Metropolitan Municipality and financed by the European Union, to leave a cleaner and more livable city to future generations, such as the issue of energy and resource consumption in order to combat the climate crisis and urban sustainability of Izmir.

### 3.1.3. An increase in average global temperatures

Global temperatures are also expected to continue to rise, as global emissions are currently on an upward trend despite the currently implemented mitigation measures. An increase in accumulated heat of about 0.95°C (compared to 2019 figures compared to the twentieth century average), affecting both land and ocean temperature, is already reducing snow cover and sea ice. Although this situation increases the likelihood of some global dangers such as rising sea levels, it also causes some dangers to decrease, such as the occurrence of extreme cold weather events in Mediterranean regions such as Izmir.

### Historical Context

Current climate data compiled for Turkey by the General Directorate of Meteorology show that monthly average minimum temperatures did not fall below 5°C between 1938 and 2019. As seen in Table 11, the lowest temperature recorded in Izmir between 1938 and 2018 was -8.2°C.

**Table 11: Monthly current climate data for Izmir, 1981-2019<sup>7</sup>**

Climate Annual Variables	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Average Temperature (°C)	8,7	9,5	11,6	15,8	20,7	25,3	27,8	27,6	23,6	18,8	14,2	10,4	17,8
Average Minimum Temperature	5,7	6,1	7,6	11,1	15,4	19,8	22,4	22,3	18,6	14,5	10,6	7,4	13,5
Lowest Temperature Recorded (°C)	5,7	6,1	7,6	11,1	15,4	19,8	22,4	22,3	18,6	14,5	10,6	7,4	13,5

The most recent data on tidal events in Bodrum over the 19-year period between 1983-2002 show that the relative sea level rose by an average of 6.8±0.9mm per year<sup>8</sup>. These figures are consistent with estimates of sea level rise around the world (although more recent reports suggest these estimates are understated).

In terms of the effects experienced in the past, the rise in sea level has not yet had a harmful effect on Izmir. It is known that coastal flooding during storm events disrupts transportation activities and causes some damage to buildings as stated in section 3.1.2 of this report.

Due to the narrow entrance and exit of the Mediterranean Sea to the Atlantic Ocean, the tidal range in the Aegean Sea is also low. The low tidal range also reduces the magnitude and thus the impact of spring tides, which are known to cause significant disruption in other parts of the world where the tidal range is large.

Extreme cold weather is rarely encountered in Izmir, but extreme cold weather events in the form of cold waves, frosts, snowfall or hailstorms have been seen in the past. As shown in Table 11, cold air masses, which are less common than in other parts of Turkey, have caused temperatures in the province to drop down to -8°C and frosts to occur at night<sup>9</sup>.

Snowfall is rare in Izmir, but it has occurred in precipitation ranging from light snowfall to snowstorms. In 2004, a blizzard caused the closure of schools and some roads in Izmir<sup>7</sup>, and in February 2012, snow fell in the city center for the first time in 21 years<sup>7</sup>. Heavy snowfall events are more common in other parts of Türkiye, such as Istanbul, Ankara and the wider Aegean region; It is known that there are disruptions in the regional and national transportation network due to canceled or delayed flights and traffic accidents.

### Climate Change Projections:

As mentioned in Section 3.1.2, regional forecasts for rising temperatures show an increase of close to 50°C from today's level in 2100 (Table 12).

**Table 12: Climate change forecasts for the province of Izmir based on the initial / current day conditions. RCP 8.5 high emission scenario<sup>2</sup>**

Variables Today	2021-2050	2051 - 2100
Annual average temperature 16,6 changes (°C)	16,6	+1,7 +4,6

SOURCE: <sup>46</sup>Lindsey, R & Dahlman, L (2020). İklim Değişikliği: Küresel Sıcaklık. <https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature>

<sup>47</sup><https://www.mgm.gov.tr/veridegerlendirme/il-ve-ilceler-istatistik.aspx?m=IZMIR>

<sup>48</sup>Kuleli, T. (2010). Topografi ve Sayım Verileri ile Deniz Seviyesinin Türkiye Kıyı Bölgesinde Yükselmesinin İlişkin Kent Temelli Risk Değerlendirmesi

<sup>49</sup><https://www.climatestotravel.com/climate/turkey/izmir>

<sup>50</sup><https://www.terradaily.com/2004/04/01213103147.s7b3sh7u.html> <sup>51</sup><http://turkishlifeafe.com/turkish-living/returned-from-dikili-izmir/>



The annual temperature trend between 1960 and 2100 in Figure 16 also indicates this increase; The red line shows the RCP8.5 scenario that may occur when mitigation measures are not taken

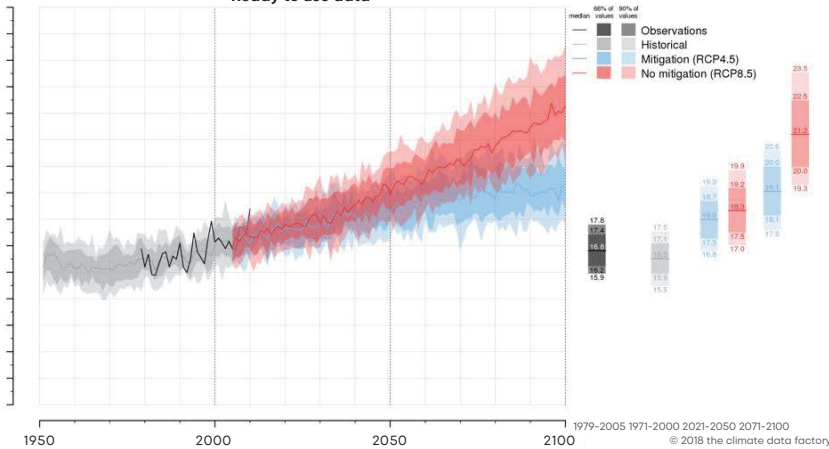
**Physical and Social Characteristics**

İzmir, a coastal city, has a coastline of approximately 60 km at an altitude of 10 m above sea level.

According to a study conducted in 2010, there are 21 settlements with a population of 116,147 on the coastline covering an area of 754.96 km<sup>2</sup>.

As this low altitude coastline hosts most of İzmir's economic activity, İzmir falls into a "more" vulnerable category among coastal cities in Türkiye, as shown in Figure 18. According to a study conducted in 2010, İzmir was ranked as the second most risky province after Antalya<sup>55</sup>. While determining the risk level, location, population growth rate, share from the national budget, agricultural production rate, built-up settlements and population living in low-altitude areas were taken into account.

**Temperature (Annual trend) - İzmir (Türkiye)**  
Ready to use data



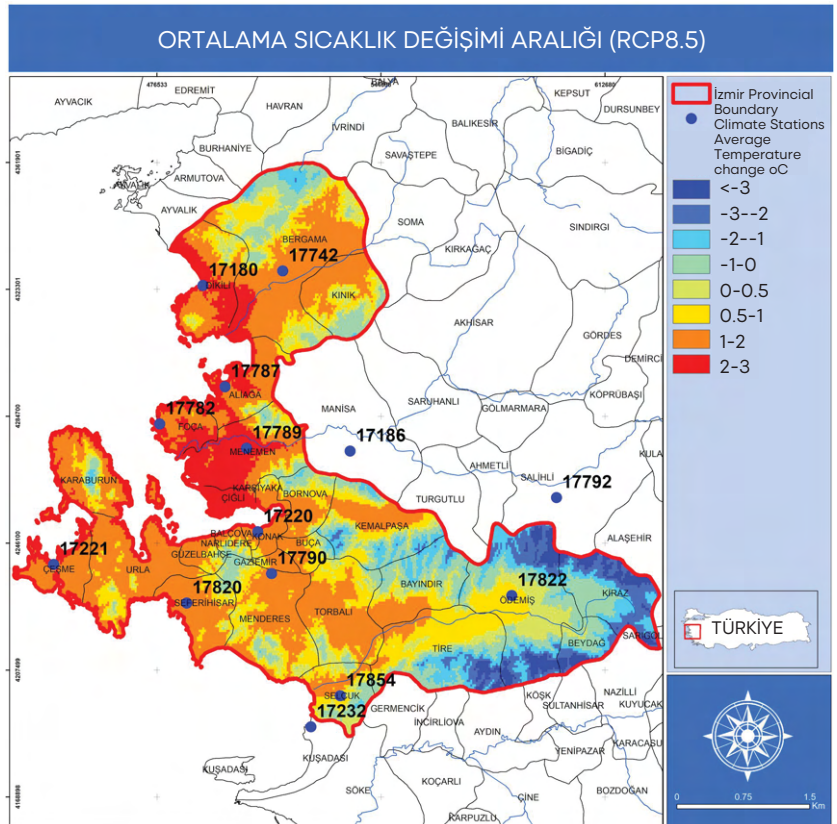
**Figure 16: Temperature (annual trend) for İzmir. RCP 8.5 high emission scenario<sup>5</sup>.**

Table 13 shows the projected global sea level rise by 2100 under the RCP8.5 high emission scenario in IPPC AR5, in line with the increase in average temperature<sup>54</sup>.

The expected increases in annual average temperatures for İzmir province are shown in the map below. This map shows the changes between historical reference values and future temperature projections according to the RCP8.5 high emission scenario.

**Table 13: Historical and projected rise in sea level<sup>54</sup>.**

Variable	<2100
Total SLR (mm)	520-980mm



**Figure 17: Annual temperature changes for İzmir province for the future (2050 - 2100) according to the current (1971 - 2000)<sup>52</sup> and RCP8.5 scenarios.<sup>52</sup>**

SOURCE: <sup>52</sup>A Framework for Climate-Resilient Cities: A Green-Focused Adaptation Guide,<sup>2019</sup>

<sup>53</sup>Climate Data Factory (2018) (<https://theclimatedatafactory.com/>)

<sup>54</sup>Church, J.A., Clark, P.U. (2018). IPCC AR5 Bölüm 13: Sea level rise

<sup>55</sup>Kuleli, T. (2010). Evaluation of sea level rise by cities

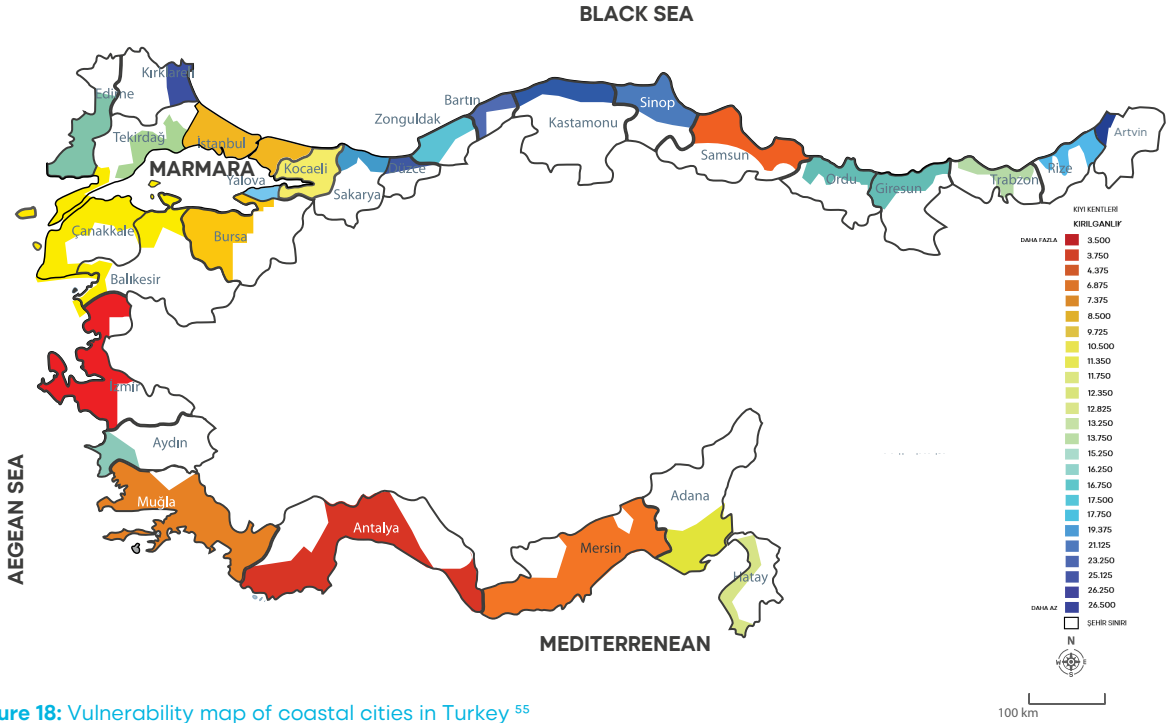


Figure 18: Vulnerability map of coastal cities in Turkey <sup>55</sup>

Since the economic activities of İzmir are concentrated in low altitude coastal areas, the loss of this land due to the rise in sea level will have a very negative impact on the GDP of both the region and the country. Figure 1955 shows the possible loss of land on the İzmir coastline due to the estimated rise in sea level.

The use of these low-altitude, vulnerable areas of İzmir in agriculture is as in Table 14.

Table 14: Use of Agricultural Lands in İzmir <sup>56</sup>

Land use type	Land size (decare)1996		
	1996	2006	2016
Cereals and Other Crops	810.150	1.329.849	1.485.353
Fruit, Beverage and Spice Crops	1.342.410	1.329.945	1.485.153
Vegetable Gardens Area	435.900	434.959	3935.090
Uncultivated Land	6.470	29.995	30.420
Ornamental Plant Area	-	30.420	16.181
	3.595.000	3.539.943	3.291.230

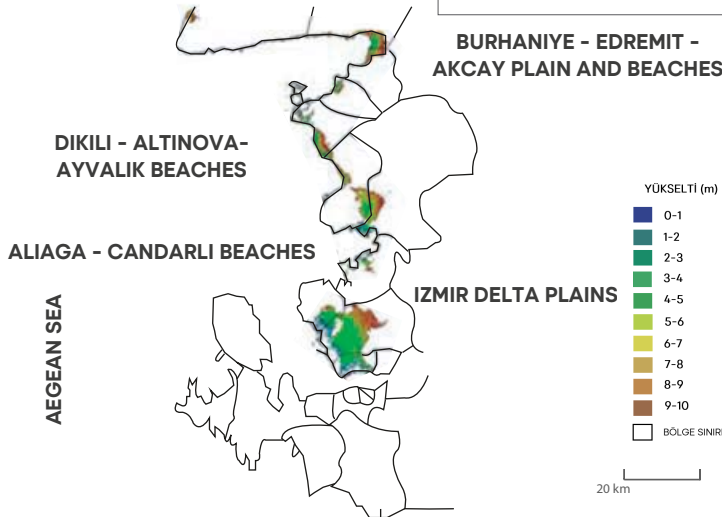


Figure 19: Possible loss of land around İzmir, on the Aegean coast<sup>55</sup>

İzmir's agricultural sector ranks third in Türkiye in terms of both animal husbandry and plant production. İzmir's share in the agricultural sector in the Aegean Region is 22.4%, which constitutes 4% of Türkiye's agricultural Gross Value Added. Meat produced in İzmir, which is extremely strong in animal husbandry, constitutes 9.5% of Türkiye's total production. Türkiye's agricultural exports were calculated as 9.2 billion USD in 2017.<sup>57</sup>

SOURCE: <sup>55</sup>Turkish Statistical Institute 2017

<sup>57</sup>Key Agricultural Product Risk Assessment Report on Financial Resilience of Major Agricultural Products to Climate Change World Bank. 2018





### 3.2. Risk Evaluation

The following section summarizes the opportunities as well as the current and future risks associated with the 12 key sectors outlined in the CoM methodology. The risks detailed in the tables in this section are "high" risks according to GCoM's risk matrix (in Appendix D) only in terms of the time frame during which the stated impact can occur. A detailed breakdown of all aspects of the risk and vulnerability assessment can be found in the associated CoM Reporting template excel workbook and Appendix E.

#### 3.2.1. Hazards

The first step in this risk assessment process was to determine the current risk level of 9 basic hazards in the CoM methodology, based on the climate events that took place in Izmir in the past. As a result of this analysis, 6 of the 9 hazards identified are at 'high', 2 at 'moderate' and 1 at 'low' risk level. These are summarized in Table 15 below.

**Table 15:** Primary Climate Hazards and current level of risk identified

Climate Hazards	Current Level of Risk
Extreme temperature	High
Extreme cold	Low
Extreme precipitation	High
Floods (stream and urban)	High
Sea level rise	Medium
Drought	High
Storms (strong wind)	Medium
Landslides	High
Forest fires	High



The European Bank for Reconstruction and Development (EBRD) provided a grant of 300 thousand Euros for the preparation of a "Green City Action Plan" for İzmir for the first time in Turkey. All stakeholders of the city took part in the preparation process of the Green City Action Plan. It is an exact excerpt from the Izmir Green City Action Plan, which was prepared with the contribution of more than 100 participants from Izmir Metropolitan Municipality units, public institutions, non-governmental organizations, universities and professional chambers and approved in the parliament on 16 December 2020.;


**T1.5: Municipal vehicle fleet and utility vehicles: Electric and low carbon vehicles**

	<p>2.2 A Sustainable Transportation System Will Be Established That Does Not Restrict Each Other's Mobility Between Transportation Types and Allows Different Options</p> <p>2.4 Access to Reliable, Sustainable and Affordable Energy for Everyone will be Supported</p>
<b>Definition</b>	<p>This action is split into two parts, which are the renewal of the IMM bus fleet with the purchase of electric buses and the purchase of low-carbon utility vehicles.</p>
<b>Reason</b>	<p><b>a) Electric Bus Purchase:</b>                  IMM will continue its efforts to replace the old municipal buses and expand its existing fleet with electric buses. This action is based on the ESHOT Strategic Plan, which includes the expectation to purchase approximately 400 electric buses by 2024. Currently, ESHOT has 20 electric buses purchased from a local manufacturer in 2017 at a cost of around EUR 400,000 per bus and plans to purchase 380 units. Although electric buses have an initial investment cost of up to €250,000 higher than diesel buses, ESHOT found that these electric buses cost 78% less in fuel and 40% in maintenance. Considering the need to replace old vehicles and increase the capacity that will be needed in the future, ESHOT has planned to replace 871 buses in the 2020-2025 period and 530 buses in the 2025-2030 period, thus planning to purchase 1,401 new buses in total by 2030. As the first phase of this renewal process, ESHOT will purchase 304 diesel buses in 2021. The rest 1,097 electric buses will be purchased between 2021 and 2030.</p> <p><b>b) Service Vehicle Purchase</b>                  IMM currently procures the purchase of service vehicles through external tenders, and these vehicles are mostly fossil fueled, namely gasoline and diesel vehicles. According to the 2018 Activity Report of the IMM, there are 120 passenger vehicles, 197 cargo, personnel and cargo vehicles, 9 off-road vehicles and 553 special-purpose vehicles within the IMM. In addition, 235 vehicles (passenger cars and pickup trucks), 1,801 minibuses and buses, 12 construction vehicles and 12 water tankers were leased by IMM. This action aims to revise IMM's current purchasing policy in order to encourage the purchase or rental of electric or low-carbon alternative vehicles.</p> <p>53% of public transportation is provided by buses. While most of these are diesel fueled, they have relatively high operating costs, risks of gasoline price volatility, and environmental issues<sup>21</sup>. The EU has set ambitious targets and stated that the number of fossil fuel vehicles should be reduced by 50% by 2030 and all fossil fuel vehicles should be eliminated by 2050.</p> <p>The municipality has already purchased 20 electric buses. However, most of IMM's bus fleet is old, inefficient and passenger comfort can be improved. A comprehensive improvement program will be the main driver of this change, resulting in improved air quality and comfort and reduced noise levels.</p>

SOURCE: <sup>21</sup>Izmir Transportation Master Plan (UPI 2030), page 166



**T1.5: Municipal vehicle fleet and utility vehicles: Electric and low carbon vehicles (Continued)**

<p><b>Application Steps</b></p>	<p><b>Electric Bus Purchase</b>                      1.Setting annual targets for fleet change.                      2.Contacting financing providers to identify financing options.                      3.Identifying new sites for charging buses and utility vehicles, taking into account space requirements, charging speeds and grid capacity. This may include dedicated charging sites or on-road charging facilities for multiple buses.                      4.Conducting feasibility studies for solar energy for clean energy generation to further reduce emissions.</p> <p><b>Service Vehicle Purchase:</b>                      1.Determining a work schedule for service tool renewal/replacement.                      2.Review of current service vehicle purchase policy to reflect demand for electric or low carbon vehicles.                      3.Preparation of tender documents and invitations to tender.</p>	
<p><b>Action Type</b></p>	<p>Investment Project</p>	
<p><b>Positively Affected Environmental Values</b></p>		
<p><b>Climate change risks and/or vulnerabilities addressed</b></p>	<p>-</p>	
<p><b>Expected reduction in emissions</b></p>	<p>Emission reduction of 55% targeted for 80% of the entire vehicle fleet Reduction of 127,494 tCO<sub>2</sub>e by 2030</p>	
<p><b>Application Plan</b></p>	<p><b>Eylem sahibi</b></p>	<p>ESHOT</p>
	<p><b>Stakeholders</b></p>	<p>IMM</p>
	<p><b>Financing options</b></p>	<p>Municipal budget, international financial institutions, Ilbank, public-private sector collaborations, private enterprises</p>
	<p><b>Income/savings opportunities</b></p>	<p>After the initial investment cost, the operating costs of electric vehicles will be lower than that of the existing fleet. For each bus, it will be possible to save 14.500 € on fuel costs and 3.900 € on maintenance costs. Revenues can also be increased through higher public transport participation. With the improvement of air quality, it can reduce various health expenditures.</p>
	<p><b>Time frame</b></p>	<p>2021-2030</p>
<p><b>Impact Measurements</b></p>	<ul style="list-style-type: none"> <li>• Electric vehicle ratio</li> <li>• Public transport CO<sub>2</sub> emissions</li> <li>• Number of electric vehicle passengers</li> <li>• Total number of electric vehicles in the fleet</li> </ul>	
<p><b>Estimated cost</b></p>	<p><b>Initial Investment Cost:</b> 400.000.000 € - 600.000.000 €  <b>Operating Cost:</b> 78,000 € - 98,000 €  <b>Design/Development Costs:</b> 64,000 € - 80,000 €</p>	
<p><b>Anticipated benefits</b></p>	<p><b>Health Effects:</b> Public health-decreased pollution  <b>Economic Development:</b> Increasing economic productivity; economic growth, job creation, Income/saving generating activities  <b>Social Inclusion:</b> Access to essential services  <b>Environmental:</b> Reducing pollution and greenhouse gas emissions</p>	
<p><b>Utilized</b></p>	<p>izmir SEEP 2016</p>	
<p><b>Current Studies Compliance with 1/25.000 Scaled IMM Environmental Plan</b></p>	<p>Not spatially dependent.</p>	

## Group 2: To further develop sustainable transportation options

### Transport: T1.7

The second biggest source of greenhouse gas emissions in İzmir is the transportation sector with 23%. Public transportation and walking are the most preferred types of travel in İzmir, with travel rates of 38.8% and 35%, respectively. On the other hand, the use of private vehicles, which currently accounts for 28% of journeys, is expected to increase unless necessary policy interventions and infrastructure investments are made.

There is a high degree of traffic congestion in İzmir during the peak hours of traffic, and this can be understood from the decrease in travel speed throughout the province during peak hours. Due to traffic congestion, vehicles work idly because they stop and go for long periods on the roads, thus causing greenhouse gas emissions. Emissions from private vehicle use increase more with the increase in the average age of the vehicles. The average age of vehicles in İzmir is 13 years and this value is high. The reason why older vehicles emit more greenhouse gases is that these vehicles are less efficient and cause more CO<sub>2</sub> emissions than newer models<sup>22</sup>.

This group aims to increase sustainable and environmentally friendly transport options for both public transport and local mobility.

### Studies done in the current situation:

Transportation is one of the top priority sectors for Türkiye. At the national level, development plans, strategy documents, action plans, laws and regulations, transportation in general, and energy efficient transportation systems in particular, and principles related to these were determined. At the municipal level, IMM has drawn up the following plans and taken measures to raise awareness and participation of citizens, establishing a framework for a sustainable, cost-effective and energy-efficient public transport system. Related actions and documents are as follows:

• İzmir Transportation Master Plan (UPI 2030) was prepared by the IMM Department of Transportation and published in 2017. It includes many actions focused on the development of transport infrastructure, such as the project to extend the İzmir Metro line supported by the EBRD.

• A total of 177 km of public transportation rail system lines, including metro line, tram line and suburban line (İZBAN), were built by IMM and TCDD. The 7.2 km metro line, which is under construction between Fahrettin Altay and Narlidere, is expected to be completed in 2021. According to UPI 2030, it is planned that 664 km of public transport rail lines will be in use by 2030.

• UPI 2030 proposes to integrate the parking network with the existing transport network under the "Park and Go" systems.

• As of 2020, there are 67 km of bicycle paths in the city. These roads are for urban transportation purposes. In order to increase bicycle transportation, in accordance with the Bicycle Paths Regulation published on 12 December 2019, 40 km bicycle paths have been arranged in 2020 with the qualities of "Separated, Bicycle Paths", "Shared Bicycle Paths" and "Bike Lanes". With the regulations to be implemented, there will be a total of 107 km of bicycle paths in İzmir. Under UPI 2030, it is planned to increase the bike path length to 402 km by 2030.

• Within the scope of UPI 2030, it is aimed to make pedestrianization in total 145 km in some districts including Narlidere, Balçova, Konak, Bornova, Buca, Karşıyaka and Cigli districts.

• As of 2020, a shared vehicle service for 200 vehicles has been started by İZELMAN within the IMM. <sup>23</sup> "Martı", which also provides shared electric scooter services, started its operations in 9 provinces, including İzmir. In addition, there are two different shared bike programs, BISIM and KARBIS, which serve with a total of more than 500 bicycles in İzmir.

• İzmir Clean Air Action Plan states that measures should be taken against vehicles and industrial activities that use a significant amount of fossil fuels.

• İzmir Clean Air Action Plan, prepared by the Provincial Directorate of Environment and Urbanization of the MoEU, has been developed in coordination with IMM to provide projects, awareness raising and special guidance to increase air quality. This plan proposes the expansion of public transport, the development of railway and metro systems, the emphasis on maritime transport and the promotion of public transport use<sup>26</sup>,

• İzmir Sustainable Energy Action Plan (SEEP) includes specific actions on energy efficiency in transportation.:

Increasing the efficiency of public transportation by integrating railway systems and other transportation systems,

Integration of public transportation with high-speed train,

2% increase in cycling on business trips

5% increase in pedestrian transportation in business trips,

• The EBRD played an important role in the implementation of the targets set by UPI 2030 and provided financing for the renewal of public transport ferries, the development of traffic control systems (2013) and the purchase of 85 metro vehicles (2014). The EBRD is currently financing the construction of the 7.2 km long metro line between Fahrettin Altay and Narlidere, with a loan agreement of 80 million Euros with IMM.

## IMM Strategic Plan for the Action 2020-2024 Goals

The following strategic goals and objectives have been selected from the IMM Strategic Plan 2020-2024 on sustainable urban transport: <sup>27</sup>

SOURCE: <sup>22</sup> Xiao, C, Chang, M, Guo, P, Chen Q, Tian X. (2019). Comparison of the cost-effectiveness of eliminating high-polluting old vehicles and imposing driving restrictions to reduce vehicles emission in Beijing. Transportation Research Part D: Transport and Environment. Volume 67. Pg. 291-302. <https://doi.org/10.1016/j.trd.2018.10.006>

<sup>23</sup>Haberler, İzmir Büyükşehir Belediyesi, <https://www.izmir.bel.tr/tr/Haberler/izmir-de-paylasimli-arac-kullanimi-icin-ilk-adim-atildi/41339/156>

<sup>24</sup>Conference Paper, "Bike Sharing Programs in Turkey", <https://www.researchgate.net/publication/329143871>

<sup>25</sup><https://www.bisikletizm.com/bike-sharing-bisiklet-paylasim-sistemleri/> <sup>26</sup>İzmir Temiz Hava Eylem Planı, 2016 <sup>27</sup>IMM Strategic Plan 2020-2024



**Table 13: IMM Strategic Plan 2020-2024 Targets discussed in this group**

Strategic Heading	Strategic Purpose	Strategic Target
Quality of Life - Public Transportation	2. Transforming Izmir into a Smart City with a High Quality of Life and a Developed Transportation Network	2.1 Public Transportation Will Be Made Economical, Energy Efficient, Fair, Comfortable, Widespread and Accessible to All
Quality of Life - Urban Transportation	2. Transforming Izmir into a Smart City with a High Quality of Life and a Developed Transportation Network	2.2 A Sustainable Transportation System Will Be Established That Does Not Restrict Each Other's Mobility Between Transportation Types and Allows Different Options

### Priority Environmental Challenges Addressed

The following key findings from this study were presented at the Challenge Priority Workshop. The workshop consulted Technical Committee members and stakeholders to validate these findings and prioritize challenges. The primary environmental challenges in supporting more sustainable transportation methods in Izmir are as follows:

### Case Study: Examples of good practice from other cities <sup>28</sup>

#### Copenhagen's Cycling Strategy

Copenhagen aims to be the best cycling city in the world by 2025. This target: It is integrated with the city's health plan, which aims to increase the livability of the city and make the city carbon-neutral by 2025.

Copenhagen spent 80 million Euros to develop its cycling strategies and infrastructure. 25 million Euros were spent in 2012 and 30 million Euros in 2014.

#### Planning and Infrastructure:

Two dimensions of implementation emerged: planning and infrastructure. Planning has now become integrated with urban development and management in Copenhagen. Since 2002, 4 policies, plans and strategies on cycling have been developed. The Copenhagen Cycling Strategy 2011-2025 includes targets such as increasing daily bicycle use in Copenhagen to 240,000 by 2025. This number was 110,000 in 1970 and 150,000 in 2015. While the Priority Plan contains information on implementation, the Transport and Environment Plan seeks to answer how the bicycle infrastructure will be funded.

**Table 14: Priority Environmental Challenges**

Status Indicator	Priority Environmental Challenge
Greenhouse Gas Emissions	Private vehicle ownership is increasing by 6% each year. The ratio of private vehicles among all modes of transport is increasing accordingly (currently 28%).
Greenhouse Gas Emissions	Low-carbon transportation alternatives such as bicycles are rarely used. According to the opinions expressed, although the existing bike paths are suitable for city tours, they are not suitable for business trips.
Greenhouse Gas Emissions	During peak traffic hours, there is a serious traffic jam in the city. This causes vehicles to slow down, idle vehicles for a long time, and greenhouse gas emissions. This problem is likely to increase as the use of private vehicles increases.

Bicycle infrastructure applications include:

- Build a bicycle network that is free from pedestrians and vehicular traffic,
- Bicycle traffic lights that will enable cyclists to move before vehicles at intersections,
- Bicycle lanes painted in different colors on roads shared by cars and bicycles.

### Action

The Green City action developed on more sustainable mobility options is summarized below (Table 15).

Cycle lanes will be increased in the city to increase the rate of cycling in the city and the city will be suitable for 60,000 additional cyclists by 2025. From 2010 to 2014,

**Table 15: Action in Group 2**

Action Code	Action Title	Action Type	Priority Challenges	Impact Level of Action	Indicative Cost
T1.7	More sustainable urban mobility: public transport and local mobility	Investment Project	Different Public Transportation Opportunities	High	<b>First Investment Cost:</b> Pedestrianization: €172,405,000 for 145 km Bicycle: €69,498,000 for 351 km

Today, the use of bicycles in Izmir has a very small share in the total travel types. One of the biggest reasons for this is the insufficient bicycle infrastructure. This is a case study; It provides a good example of planning, strategy, policy development and investment to improve cycling infrastructure and increase the share of cycling in transportation.



SOURCE: <sup>28</sup>Urban Sustainability Exchange, The City of Copenhagen's Bicycle Strategy Case Study, <https://use.metropolis.org/case-studies/cycling-in-copenhagen>

# Izmir's Strategy for Living in Harmony With Nature

Exactly quoted from İzmir's Strategy for Living in Harmony with Nature.

## 6. İzmir's Strategy for Living in Harmony with Nature

Societies before us; they became aware of the cycles of nature and learned to act with it. However, with industrialization and commercialization, nature and culture relations have begun to be grasped more in the last two centuries through urbanization and the struggle with its problems. The recent past, in which the city and the countryside were perceived as separate from each other, the urbanization dominated the rural areas and the nature was tried to be controlled, was characterized by the city-nature opposition.

In the Anthropocene Age, when the human-centered perspective reached its peak, new approaches began to be needed as natural resources reached the point of depletion and combined with other problem and crisis areas.

Therefore, another form of being together with nature, that is, harmony with nature, began to develop. Brand new areas such as CittaSlow and fair trade, geographical indication, slow food movement have opened up in our minds to preserve the connection with nature. Nowadays, beyond harmony, we need steps to transition to a nature-based life that will eliminate all these contrasting perceptions, re-establish the integrity of life, and re-naturalize our cities with radical innovations (Figure 6.1).

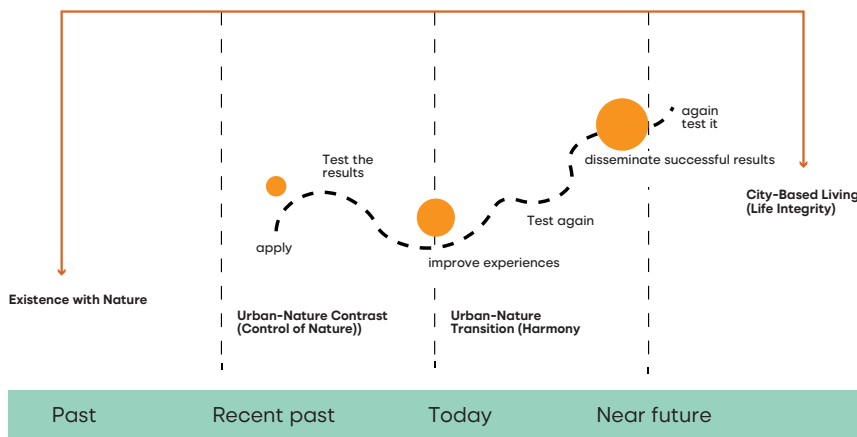


Figure 6.1 The development of the nature-based life principle

Bith this in mind, İzmir's basic strategy to combat the climate crisis and to be a city in harmony with nature has been described as "combining physical, economic and cultural plans for the management of urban and rural areas". Rather than talking about two separate parts, the ecosystem, such as the urban landscape and the rural landscape, it is to bring them together in the flow of life in the unity of nature and culture. This basic strategy is also at the core of İzmir's application for the European Green Capital in 2020 (Figure 6.2).

## Izmir's Basic Strategy

The main strategy of İzmir, a candidate for the European Green Capital, to combat the climate crisis and to be a city in harmony with nature:

Joining physical, economic and cultural plans for the management of urban and rural areas.



Figure 6.2 The basic strategy of İzmir's nature and climate action

Contrary to the traditional urban planning approach, where there is no urban flexibility, İzmir aims to establish a subtle relationship between the urban and ecological layers of life.

This integrated perspective encompasses the cyclical design of not only spaces but also economic and cultural relations between city and countryside.

In line with İzmir's basic strategy and circular city principles described above, three results are aimed to emerge cumulatively:

- To be a city resistant to natural disasters
- Increasing welfare and ensuring its fair distribution
- Conserving biodiversity

This report presents the four basic steps of İzmir's "nature and climate action" by presenting a summary of all the studies mentioned in the above sections: (i) Ensuring the penetration of nature into the city, (ii) ensuring the harmony of people's penetration of rural areas with nature, (iii) promoting the circular economy and (iv) strengthen the link between urban and rural cultures.



### (I) Ensuring the penetration of nature into the city

Under this step, mechanisms are proposed for the penetration of natural plant and animal species, water and other natural assets around the city into the city, unlike urbanization models based on nature-culture opposition and separation. To achieve this, a series of landscapes that can display ecological continuity are interrelated, from gardens to street afforestation, from urban open spaces to regional parks. It is aimed to use the natural flora of the Mediterranean and Izmir region instead of exotic plant species in the green areas of the city. Starting from 2021, a comprehensive program has been initiated to ensure that the urban flora of Izmir consists of climate-resistant and local species.

### (II) To harmonize people's penetration of the countryside with nature

This step means protecting the ecosystems in the periphery of the city, making them accessible to the citizens and creating common living practices. A significant part of Izmir consists of nature protection areas with different statuses such as nature parks and special environmental protection areas.



*Anatolian squirrel is widely distributed in Izmir forests and olive groves.*

However, the systems that will establish the relationship between these areas and the people of Izmir have not been built yet. Necessary mechanisms have not been established for the people of Izmir to go to these areas and rest, to touch nature, for children to get to know nature, to eat healthy and to recognize the right to life of other living things. This step includes different rural and green space designs where people can interact with wildlife, see biodiversity, and experience agriculture.

This step includes nature-based and multifunctional rural planning and use practices that improve economic resilience by removing the distinction between urban and rural. Within the framework of Izmir agriculture, many studies such as combating drought and poverty at the same time, making bio-region-based rural basin planning, planning which activities and how to allow permission in rural areas with an understanding of nature-friendly zoning, and recycling are included under this heading.

### (IV) Strengthening ties between urban and rural cultures

This last step involves connecting disparate communities with each other by establishing physical networks stretching from the port city and metropolitan culture of Izmir to its extensive regional landscape, which comes from Izmir's 8500-year history. In doing so, it prioritizes pedestrian and bicycle-oriented sustainable access that respects nature and has a low ecological footprint. Ultimately, all these steps aim to establish innovative and unifying connections in nature-culture relations; It aims to make Izmir a cyclical city that is resilient, high in welfare and at the same time protecting its biological diversity.



*Ovine and bovine breeding maintains its place as an important source of livelihood in Izmir pastures.*

Izmir, which has an ancient culture and practical practices created by living together with nature, has a great excitement and determination to transfer this knowledge to world cities and learn from them. This transformation can only be possible if Izmir re-discovers its ancient life culture and interprets it according to today's conditions. The main motivation of the city of Izmir can describe that more livable cities and the world are possible not only for human life, but also for all living things.



Izmir joined the "Plastic Waste Free Cities Network" initiated by WWF around the world and which includes 36 countries, with the signing of the statement of intent by IMM President Mr. Tunc Soyer in December 2019. Izmir was the second city that made a commitment to become a city.

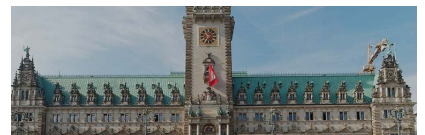
In this direction, we present the "Plastic Waste-Free City Action Plan" (exactly quoted) prepared as a result of the pilot applications initiated in Çeşme, to our esteemed readers.

1.1.2 Initiating work on the removal of single-use plastics in cafes and restaurants under the Management of the Municipality and its Subsidiaries, and in producer markets and neighborhood markets supported by the Municipality.

Strategic Plan Objectives	<b>5.1 Sustainable Waste Management and Recycling Mechanisms Will Be Developed</b>
Definition	Cafes and restaurants under the Management of the Municipality and its Subsidiaries (Elevator Restaurant, Inciralti Disabled Center Cafeteria, Yassiciada Cafeteria, Bostanlı Yasemin Cafe-Restaurant, İzmir Wildlife Park Cafeterias, Historical Gas Factory Art Cafe, Balçova Cable Car Facilities, Bornova Asik Veysel Pond Cafe, Esrefpasa) Hospital Cafeteria) and the producer's markets and neighborhood markets supported by the Municipality, by carrying out an applicability study, removing disposable products where possible.
Application Steps	<ol style="list-style-type: none"> <li>1.Meeting with stakeholders and determining the project team</li> <li>2.Field work carried out by the relevant project team in all restaurants and cafes under the management of the Municipality. Determination of easily dispensable and replaceable plastic products for each point in the studies in question.</li> <li>3.Supply of substitute products</li> <li>4.Initiation of infrastructure works for the removal of plastic bags in producer markets and neighborhood markets</li> <li>5.Encouraging vendors and citizens to take facilitating actions such as the supply of paper bags and the distribution of cloth/mesh bags.</li> <li>6.Determination and implementation of communication strategies to make the work visible and to be heard by the citizens</li> </ol>
Time Frame	2021-2023
Stakeholders	IMM Affiliate Companies Local Businesses

In 2016, the City of Hamburg introduced rules banning the use of plastic coffee pods, disposable bottles/cups/plates/cutlery, in municipalities, and introduced reusable cups to various public

institutions, including public administration cafeterias and the police academy. This move has stopped the use of up to 675,000 disposable cups each year.



SOURCE: WWF Plastic Smart Cities website



1.2.1: Green purchasing preferences in the purchase of goods and services within the municipality	
Strategic Plan Objectives	<b>6.2 Sustainable Waste Management and Recycling Mechanisms Will Be Developed</b>
Definiton	Adoption of the approach towards opting for improved plastic consumption measures that support circular economy practices in product and service purchases to be made within the institution
Application Steps	<ol style="list-style-type: none"> <li>1.Develop an assessment to identify the environmental impact of plastic products purchased and used and use this assessment to inform all purchasing units of goods and services, where appropriate, to produce alternatives to the purchase of plastics and particularly single-use plastics.</li> <li>2.Where the use of plastic is unavoidable, preferring recycled plastic, if applicable,</li> <li>3.When purchasing, choosing single polymer plastics suppliers/products (PET) that are more recyclable as a source, where applicable, or reusable products where cost is reasonable,</li> <li>4.Informing about the addition of appropriate criteria in this regard to the specifications prepared by all units that purchase goods and services</li> <li>5.Developing clear and understandable methods to verify and review the identified Criteria and to identify and monitor their effects</li> </ol> <p>2021-2025</p>
Time Frame	IMM
Action Owner	

1.2.2 Implementation of Green Protocol in Organized Events	
Strategic Plan Objectives	<b>6.2 Institutional Capacity and Operation Will Be Made More Effective, Efficient and Economical</b>
Definition	Carrying out the events/organizations/fairs to be held within the institution without plastic waste where possible
Application steps	<ol style="list-style-type: none"> <li>1. Preparation of a guide on organizing an event without plastic waste</li> <li>2.Determining the activities such as workshops/organisations/fairs/marathons organized within the body of the institution and by the IMM affiliates, and carrying out the study, including the time plan, to organize them gradually without plastic waste.</li> <li>3.Designing the events without single-use plastic waste in accordance with the prepared guide and making the announcements in this way. In this context, attention should be paid to the following issues in the event: <ul style="list-style-type: none"> <li>• Completion of the training of all personnel who will be in charge during the event.</li> <li>• Food/beverage offerings offered by the event owner and by companies/institutions that have stands as exhibitors in organizations such as fairs should not contain plastic as much as possible.</li> <li>• Presence of stations for filling water thermos in the event area where possible</li> <li>• Availability of collection equipment with colors and labels in accordance with the Zero Waste Regulation so that the wastes generated in the event area can be collected separately.</li> <li>• Presence of reminder/warning signs and signs in the plastic waste-free activity area</li> <li>• Weighing the wastes generated in accordance with the Zero Waste Regulation and directing them to the appropriate facility/disposal.</li> <li>• Review of data and management regulations on plastic-free results and optimizing the system by identifying new, improved requirements for future events</li> </ul> </li> <li>4.Strengthening announcement and communication campaigns, especially in large-participation events, in order to increase the impact and awareness.</li> </ol> <p>2021-2025</p>
Time Frame	IMM
Action Owner	Affiliate Companies

## Crested Pelican

Ahmet KAYA



*The crested pelican, one of the world's largest waterfowl, is the largest member of the pelican family. It has a length of up to 180 cm, a weight of up to 15 kg and a wingspan of up to 350 cm. The species, which we can also see in Izmir, has a wide distribution in Eurasia from the Mediterranean to Taiwan, from Basra to Siberia.*

## Recycling

Recycling is the restoring of waste materials that are not used as raw materials to the production processes with various methods.



Protects the nature



Contributes to the national



Provides energy savings



Paper



Glass



Metal



Electronic



Domestic



Plastic

## Individual Precautions in Recycling



We may prefer products with a recycling mark on their packaging.



We can save the oils we use in our meals and leave them to the headman of our neighborhood.



We can prefer rechargeable batteries instead of alkaline batteries. We can throw our waste batteries into battery waste collection boxes.



We can use cloth bags instead of disposable bags.



We can raise environmental awareness individuals by explaining the importance of recycling to our children at home and at school.



We can prevent unnecessary paper consumption in our workplaces.



We can use long-lasting glass cups and metals instead of disposable materials such as cardboard cups and plastic cutlery.



We can throw glassware in glass piggy banks instead of trash cans.



We can collect electronic waste in a separate place and leave it to municipal waste centers or electronic waste containers.



We can avoid using more than we need.



## The Only Way To Become An Energy Exporter: Green Hydrogen

**TEKSİS Advanced Technologies, which was established in Ankara in 2007 with the aim of developing innovative products in Hydrogen Energy Technologies, commercializing its academic knowledge and producing high value-added products; develops fuel cells of different capacities, electrolyzer systems for green hydrogen production.**

TEKSİS, which provides the energy of its headquarters in Ankara from green hydrogen and has an R&D structure in METU Technopolis, also offers high-tech solutions to hybrid systems created with renewable energy sources such as solar and wind.

Russia-Ukraine war, which has left a year behind, raises the awareness of energy independence of all European Union countries, especially Germany.

Developing projects to reduce dependence on natural gas supplied from Russia, EU countries continue to take bold decisions one after another that will pave the way for investments in renewable and clean energy resources. At the center of these decisions is Green Hydrogen, which is defined as the "Energy of the Future" by the world energy authorities.

### Our Way to Become an Energy Exporter Türkiye, which is 70 percent foreign

Türkiye, which is 70 percent foreign-dependent in primary energy resources, is a country that does not stay out of this process and determines its goals and strategies, albeit belatedly.

Ankara-based TEKSİS Advanced Technologies, which is one of



Huseyin DEVRİM

**Metallurgy and Material  
Engineer Teksis  
Advanced Technologies  
General Manager**

the leading companies specializing in green hydrogen in Turkey, is becoming more and more popular with its work in this field.

Huseyin Devrim, General Manager of TEKSİS Advanced Technologies, gave examples of the work done by developed countries in this area, and stated that green hydrogen is vital for Türkiye's evolution from an energy importer country to a "net energy exporter" country.

### Contribution to Natural Gas in 2035 3.5%

In the National Energy Plan announced to the whole world in January, reminding that Türkiye plans to increase its electrolyzer capacity, which is one of the important components of green hydrogen production, to 5 gigawatts until 2035, in order to reach a more flexible energy production system, Devrim said that

"In this context, in order to reduce greenhouse gas emissions in the Turkish Energy Model, natural gas used in the final sector needs to be mixed with other clean fuels such as hydrogen and synthetic methane. According to the plan, the share of hydrogen in the gas mixture in question in 2035 was determined as 3.5 percent. It is envisaged that hydrogen energy will be used in the first stage for on-site consumption and to meet the needs of the industry."

Noting that as of today, up to 20 percent green hydrogen blending can be made into pipelines without the need for any revision, storage and transportation investment in the existing natural gas system in Germany and England, Huseyin Devrim made the following assessment:



## “The Signature With Germany Is Very Important”

In accordance with the National Hydrogen Strategy, Germany determined in which sectors and how much hydrogen produced from clean sources will be used in the coming years. Their own production resources are not enough to meet this need. So it plans to bring green hydrogen from abroad. Türkiye ranks first among potential suppliers. Let's be aware of the great potential we have in the production of green hydrogen from renewable sources as a country. We must quickly mobilize the mechanisms and ecosystem that will seize this opportunity. Tomorrow, when Germany says, "We have signed, our need for green hydrogen is huge, we are ready to buy what you produce", we need to be ready too. It may be possible for Türkiye, which is dependent on foreign energy resources, to become an energy exporter in a short time."

## Türkiye is Among The Luckiest Countries

Reminding that the European Union sees green hydrogen as an important tool to achieve its "Decarbonization and Climate Neutral" targets, Huseyin Devrim emphasized that Türkiye, which has written a success story that has attracted the attention of the whole world, is among the rare countries that can make this production.

Noting that the ongoing war between Russia and Ukraine has pushed all countries to rethink the diversification of energy resources, Devrim continued as follows:

"Türkiye, which produces approximately one third of its electricity from natural gas and is 97 percent dependent on imports for the same natural gas, needs to produce this energy from renewable sources and establish a hydrogen ecosystem. Today, investors in many countries of the world, especially in European countries, focus on investment opportunities in green hydrogen. When we establish this ecosystem, we will be the address of investments."

## Box 1 24% Green Hydrogen by 2050

It is estimated that 24 percent of the world's energy needs will be supplied by green hydrogen in 2050.



Hydrogen-fueled vehicles have both a tank as in gasoline vehicles and a fuel cell as in electric vehicles. Thanks to this fuel cell, vehicles that obtain chemical reactions from hydrogen molecules produce their own electricity.

The movement is provided by directing the generated electricity to the motor. It does not pollute the air in any way, since only water vapor is emitted as waste instead of exhaust gas. A passenger car can travel approximately 1000 km with 5-6 liters of hydrogen.

Türkiye is one of the countries that can produce green hydrogen most efficiently and on a large scale in the world. It has the means to make this production through both domestic water resources and Offshore Wind Power Plants that can be established in its seas.

Türkiye, which spends 100 billion dollars on energy imports in 2022, can become an energy exporter with green hydrogen.

The green hydrogen cooperation memorandum signed by the Minister of Energy and Natural Resources, Fatih Dönmez, with the German Minister of Economy and Climate Protection, Robert Habeck, during his visit to Germany on October 11, 2022, is of historical importance for Türkiye in this sense.

In accordance with the National Hydrogen Strategy, Germany determined in which sectors and how much hydrogen produced from clean resources will be used in the coming years. Their own production resources are not enough to meet this need. That's why he plans to bring green hydrogen from abroad. Türkiye ranks first among potential suppliers.

The problems with green hydrogen, which is known to be much cleaner than electricity in terms of energy, stem from the lack of necessary infrastructure yet.

## Box 2 Only 4% of Hydrogen Produced Today Is Green

While 70 million tons of hydrogen are produced annually all over the world, only 4% of this production falls into the green hydrogen class and is produced from renewable resources. The remaining 48 percent of the production is realized using natural gas, 30 percent oil and 18 percent coal.

Hydrogen production from coal is called "brown hydrogen", while hydrogen produced from natural gas is defined as "grey hydrogen". Electric hydrogen production from renewable sources is called "green hydrogen" in the literature.

## Onur Energy Sustainable Energy Efficiency and Cost and Carbon Reduction Studies



Onur GUNDURU

Computer Engineer  
Onur Energy - CEO

Onur Energy, which focuses on the fight against the climate crisis, continues to provide innovation-oriented technical consultancy services with the same enthusiasm for 40 years. It accompanies public and private enterprises on their journeys, starting with energy efficiency, which is the first step to reduce energy costs and related carbon emissions. Energy efficiency is doing the same job with less resources without sacrificing quality. It decomposes at this point only with energy saving.

It provides services at international standards in the areas of opportunity discovery for ISO 50001 compliant energy management system projects, energy audits and measurements, finding suitable sustainable finance, preparation of energy identity documents and measurement & verification of applications to ensure energy efficiency.

An ISO 50001 compliant EnMS should be the first step towards sustainable energy efficiency for your business. Depending on the business scale, it can take from 1 to 12 months for an EnMS installation. In your planning, there should be a team that will be established in proportion to your business scale, with the participation of employees from all levels, and quality time should be allocated for the team to work together. The Carbon Ninja platform, which we are developing in Ege University techno park to monitor the EnYS installation process, has the potential to radically change the entire industry.

In order to make energy planning, energy consumption data, process, process and equipment information that creates energy consumption and production data that leads to consumption are required.

Analysis of all these data with statistical methods, determination of energy performance indicators (EnPG), determination of critical maintenance and operating parameters, a study should be conducted to create your energy opportunities and efficiency action plans related to it.

Energy surveys and measurements are very important studies in order to reduce energy consumption and energy-related carbon emissions by taking more data from points with important opportunities, interpreting these data together with experts, and making strategic decisions based on them. While planning these works, care should be taken not to coincide with the downtime and to have the personnel directly related to the subject on the field.







Our technical team examines your existing systems and offers suggestions that will increase their efficiency, while also providing information about new technologies that will save energy. Thus, it both reduces your energy costs and strengthens your prestige as an environmentally friendly business.

## Innovation

It has completed projects related to energy flexibility, energy efficiency, energy production and distribution, process efficiency, energy saving and energy recovery in industry and buildings, together with its creative business network, by exporting services based on innovation through research and development activities.

Within the scope of the BRICKER project<sup>1</sup>, which is one of the largest and supported by the EU within the scope of the 7th Framework, together with Ozyegin University, Aydın Adnan Menderes University has installed the largest building integrated solar thermal system in our country. Currently, Ege University Technopark is developing a software platform to facilitate 50001 applications.

Currently, Ege University Technopark is developing a software platform to facilitate 50001 applications.

Our Izmir-based company, Izenergy, has become a partner in the climate mission of our city and Izmir Metropolitan Municipality. By contributing wholeheartedly and professionally to all the activities to be carried out within the scope of the Climate Neutral and Smart Cities Mission, we want our city to set an example for other stakeholder cities with its activities to rapidly reduce its emissions and expand it.

Achieving social climate goals is only possible with a well-functioning cooperation. Acting with the awareness of this, our company continues to work to achieve green transformation together with our ENSIA clustering association, of which we are one of the founders, and our EYODER association, where we serve on the board of directors.

## Onur GUNDURU

He graduated from Izmir Institute of Technology Computer Engineering Department in 2002 with a degree. She started her career with her graduation thesis and graduated from University Engineering and Technology Management graduate program by taking various courses in the fields of energy, nanotechnology and biotechnology in 2005. He took part in the establishment process of both the Chamber of Electrical Engineers Izmir Branch and the Chamber of Computer Engineers.

He is the technical manager and managing partner of Onur Enerji, which participates in the fight against climate change by developing projects in the fields of energy efficiency and renewable energy. Since 2010, he has completed more than 150 projects in the fields of energy management, energy audits, establishment and supervision of energy management system and validation of energy projects.

He has been active as a board member of the EYODER Association since 2014 and as a board member of the Energy Industrialists and Businessmen's Association, which focuses on the ENSIA Turkish Clean Energy Clustering study, of which he is one of the founders since 2016. and new generation technologies as a speaker, consultant and mentor in related projects..

# Izmir Green City Action Plan and Izmir Sustainable Energy and Climate Action Plan Process

Izmir Metropolitan Municipality, which has taken steps for the vision of offering a cleaner and more sustainable environment to future generations, adopted by our municipality in its understanding of service and management structure for the city and its citizens, has prepared two important plans, Izmir Green City Action Plan (Izmir GCAP) and Izmir Sustainable Energy and Climate Action Plan (Izmir). SECAP) has completed.

Izmir is the first city of our country to be included in the European Bank for Reconstruction and Development (EBRD) Green Cities Program. Actions for solutions were determined by addressing a number of urban environmental problems, including climate change, in an inclusive manner. The aim of the Green City Action Plan (GCAP), which was prepared for the first time for Izmir with a grant support of 300 thousand Euros from the EBRD; To determine the environmental challenges and to identify the most urgent ones among them, to create a vision and develop projects that will make a greener future possible for Izmir.

Our municipality renewed its commitment in 2015 to reduce greenhouse gases by 20% on climate change, with the Assembly Decision on 15 August 2019, as a 40% reduction in greenhouse gases until 2030 in line with the European Union targets and increasing the resilience of our city by adapting to the effects of climate change. Izmir Sustainable Energy and Climate Action Plan includes greenhouse gas inventory, risk and vulnerability assessment, greenhouse gas reduction and climate adaptation actions. Izmir Sustainable Energy and Climate Action Plan, European Commission and T.R. It was financed by the European Union through the Instrument for Pre-Accession Assistance (IPA) Component 1 (Transitional Support and Institution Building) as a result of the agreement reached between the Ministry of Energy and Natural Resources and supported by the European Bank for Reconstruction and Development (EBRD).



Kemal KILIC

Climate Change and  
Head of Zero Waste  
Department

SECAP and YSEP have been prepared in accordance with scientifically prepared internationally accepted methodologies and in accordance with the Izmir Metropolitan Municipality Strategic Plan (2020-2024). Since the plans intersect on the axis of climate change and adaptation, they were created in parallel with each other in order to prevent the duplication of studies and the use of resources, and in a period of approximately 1.5 years, with a transparent and participatory approach with the presence of all relevant municipal units, affiliated institutions/organizations and companies, relevant public institutions, NGOs, universities and professional chambers.

Final action plan reports have been prepared separately for GCAP and SECAP, but these two reports are complementary; strategies and actions are aligned as much as possible. 61 actions were created in both plans in the fields of land use, waste management, buildings, environment and biodiversity, energy, public health, civil defense and emergency, water management, agriculture and forestry, tourism and transportation.

With the newly made plans, there are many actions related to adapting to the effects of climate change and making the city resilient.

In Izmir, the highest share in greenhouse gas distribution belongs to industrial emissions with 41%. Transportation is in the second place with a share of 23%. 14% of emissions originate from residences and approximately 24% in total from buildings. Emissions from agriculture account for 9% of total emissions, while waste, wastewater and street lighting account for about 3% of emissions. The emission amount, which is 5.08 tons of CO<sub>2</sub>e per capita in Izmir, becomes 3.31 tons of CO<sub>2</sub>e when the industry and civil aviation sectors are excluded. If the current situation continues, it is calculated that this emission will reach 3.51 tons of CO<sub>2</sub>e per person in 2030. When Izmir realizes a 40% emission reduction as a city, the amount of emissions per capita will decrease to 1.98 tons of CO<sub>2</sub>e.

The prepared plans constitute the road map of Izmir until 2030 on many environmental priority issues, including combating climate change and adaptation. Izmir Metropolitan Municipality contributes to the reduction of greenhouse gas with environmentally friendly investments such as renewable energy investments, the development of the rail system in transportation, bicycle and pedestrian paths, and electricity generation from waste. In this context, solar power plant installation was provided for the electrical energy needs of municipal service buildings. IMM has taken important steps in generating electricity from methane from waste areas. Methane gas is disposed of at the Harmandalı Regular Waste Storage and Biogas Facility in Cigli, and electricity is generated from landfill gas. Similarly, electricity is obtained by biomethanization method in Odemis Integrated Solid Waste Management Facility and Bergama Solid Waste Management Facility, and fertilizer is also obtained from organic wastes.

Many projects and activities are carried out to reduce emissions from transportation. For the first time in Türkiye, an electric bus fleet was created with 20 buses. The electricity used by the buses is produced from the Solar Power Plant established by ESHOT in the Gediz Workshop. By developing the rail system network, public transportation is encouraged, and a carbon-free transportation network is developed with bicycle paths and pedestrianized roads.

Climate change will have enormous impacts on ecosystems and biodiversity. The adaptation of the species in the ecosystem to the change with the change of climate, the protection of habitats and the preservation of biodiversity are serious problems. In the IMM Strategic Plan (2020-2024), there is a specific strategy and targets focusing on biological diversity in Izmir and many projects are being carried out. Within SECAP, there are actions related to reinstatement of natural wetlands, afforestation and maintenance, protection and strengthening of existing biological diversity and ecological habitats, and conservation of marine biodiversity in Izmir Bay.



## Kuwait's Consul General in Istanbul was Hosted



Kuwait's Consul General in Istanbul Mohammad S.A.S. Alsharji visited Soyer. Soyer and Alsharji, who came together, discussed the work done after the earthquake that had devastating effects in 10 provinces, conveyed their condolences to those who lost their lives in the earthquake and wished the injured to get well soon, and said that the Kuwait rescue team is also doing important work. Stating that they are ready for any kind of cooperation with Kuwait, Soyer said, "To see you and our friends with us in such difficult times and. It's nice of you to make us feel that we are not alone. We can find common working channels that will improve our relations on issues such as agriculture, tourism, waste management and smart cities."

## Karabaglar-Gaziemir Metro Departs

Izmir Metropolitan Municipality, which has come to an end in Cigli Tram, started the construction of Buca Metro, and will open Narlıdere Metro this year, in line with the contemporary and environmentalist transportation goal of IMM President Tunc Soyer, brings another line to the city. Karabaglar-Gaziemir Metro Line, which will be the 6th stage of the Izmir Light Rail System, was introduced with a ceremony held at the Ahmed Adnan Saygun Art Center. Stating that the 32.6-kilometer line will be the biggest investment of Izmir, Mayor Soyer said, "We will continue to work with all our strength to make Izmir a world city in urban transportation."



## 30 Million Euro Financing for Narlıdere Metro



A 30 million Euro Authorization Letter was signed between IMM and the European Bank for Reconstruction and Development to be used in the Fahrettin Altay-Narlıdere metro line project. IMM President Tunc Soyer said that with this financing, the Narlıdere Metro will be completed on 30 August 2023. Since President Soyer took office, a total of 186.3 million Euros of external financing has been provided within the scope of the Narlıdere Metro Project, without a treasury guarantee. The project, which will be completed with the 30 million Euro Authorization Letter signed with the EBRD, will have a total maturity of 10 years, including a 2-year principal grace period.



## Bahar Bebek Heralds Spring from Osmaniye



In Osmaniye, where the general disaster coordination is undertaken by İzmir, the Metropolitan teams are also a part of special stories. IZENERGY INC Occupational physician Bahar Tek was with Takdire Halaç, who was a survivor of a dangerous pregnancy, at every moment. Doctor Bahar Tek, who never left her hand by entering the delivery room, gave morale to the mother. Takdire Halaç named her third child Bahar, who lives in the tent city and which she held in her arms. Anne Halaç said that a mother from İzmir breastfed her child during her first birth and said, "The people of İzmir saved my two babies."

## Animals Affected by the Earthquake Were Not Forgotten

İzmir Metropolitan Municipality continues its support to earthquake zones after the earthquake that affected 11 provinces. The mobile health vehicle, which is affiliated to the IMM Environmental Protection and Control Department, Veterinary Affairs Branch Directorate, set out for the region on February 6 with a total of 8 personnel, including 2 veterinarians, 2 veterinary technicians, 2 animal sitters and 2 team drivers. He rescued and treated 126 dogs, 101 cats, 8 parrots, 6 parakeets, 3 canaries and countless poultry trapped in damaged buildings from the rubble. The teams distributed 3 tons of food in this process.



## An Exemplary Model for Türkiye in Combating Earthquakes



İzmir Institute of Technology, METU and Canakkale Onsekiz Mart University signed a protocol with the İzmir Branch of the Chamber of Civil Engineers for the building inventory study, and the Metropolitan Municipality decided to make the city a resilient city after the earthquake that occurred on October 30, 2020, in which 117 people lost their lives. continues to work uninterrupted. President Tunc Soyer stated that they started Türkiye's most comprehensive earthquake research and risk reduction projects in İzmir and said, "I believe that the works carried out in İzmir will be a model for other cities."

## 10 Thousands of Slots with #BirKiraBirYuva

Izmir Metropolitan Mayor Tunc Soyer continues the "Movement of Hope", which he started right after the earthquake disaster that affected 11 provinces, namely Kahramanmaraş, Hatay, Gaziantep, Malatya, Diyarbakir, Kilis, Sanliurfa, Adiyaman, Osmaniye, Adana and Elazig, with the support of the people of Izmir. From the first day, it provided support to the earthquake area by delivering many trucks, ships and thousands of tons of humanitarian aid materials provided by the people of Izmir and the Metropolitan Municipality to the earthquake victims.

Izmir Metropolitan Municipality Esrefpasa Hospital teams reached Hatay Antakya, one of the provinces affected by the earthquake, on 8 and started emergency interventions. Esrefpasa Hospital, which provides voluntary health services at Antakya State Hospital, has started its work with a team of 25 people in the field with a total of 6 ambulances, two of which are AKS ambulances, and 8 drivers, with specialist doctors, general practitioners, anesthesia technicians, paramedics, nurses and emergency medical technicians.



Izmir Metropolitan Municipality, which started the "One Rent One Home" campaign, which brings together those who want to find a solution to the housing problem that arose after the earthquake, make rent aid or open their vacant house to earthquake victims, and those who need a shelter, on the website [birkirabiryuva.org](http://birkirabiryuva.org). Izmir Metropolitan Municipality is

magnifying solidarity by calling on Turkey and the world.

Mayor Soyer visited Osmaniye, where Izmir undertakes the general disaster coordination among 11 metropolitan municipalities. He visited the mobile kitchen, logistics warehouse, registration center and social areas by examining the activities of the units in the Izmir Metropolitan Municipality Coordination Center, which was established in Cebelibereket Sehit Ali Alkan Secondary School, which met with the urban tradesmen and was established in Osmaniye. Soyer said, "We have to produce the best service" by meeting with the units in the field.

Apart from these works, the "Suspended Book" campaign to be sent to the earthquake zone, the solidarity concerts to be held within the scope of the Second Century Economics Congress, whose entire income was transferred to the One Rent One Home campaign, the Izmir Metropolitan Municipality, which set up a tent city in Hatay, and the 8 March celebrations for women living in the region, supported the earthquake victims by carrying out an application.



Izmir Metropolitan Municipality reached the earthquake zone with the construction equipment convoy. The convoy, which includes many construction machines and duty operators, from snowplow trucks to repair vehicles, from tankers to vacuum trucks, which were sent to the earthquake zone to be used in search and rescue works, opened the roads closed due to weather conditions under the coordination of AFAD and Hatay Metropolitan Municipality, and opened the emergency aid established in the Antakya Cemetery. went to the centre. The teams started search and rescue efforts at the points of need.





## TUYAP Book Fair Opened Its Doors

the opening of the TUYAP Book Fair, hosted by IMM Fair Izmir on March 11-19, featuring the books of nearly 300 publishers was attended by IMM Deputy Chairman Mustafa Ozulu, former Minister of Culture Ercan Karakas, Turkish Publishers Association Board Chairman Kenan Kocaturk, honorary writer Veysel Colak, TUYAP Fairs Production Inc General Manager İlhan Ersozlu, Karsiyaka Mayor Cemil Tugay, İzmir Provincial Culture and Tourism Director Murat Karacanta, İzmir City Council President Nilay Kokkilinc, IYI Party İzmir Provincial President Sinan Bezircioglu and book lovers attended.



## Sponge City Izmir Project Attracted Great Interest



Izmir Metropolitan Municipality Mayor Tunc Soyer examined the pilot implementation of the Sponge City Izmir project in Bornova, which was implemented for the first time in Türkiye with the vision of "Another Water Management is Possible". The rain water tanks located in Camkiran Site Ogun Apartment in Bornova Manavkuyu District, which installed the rain water tanks donated by the Metropolitan Municipality on its roof, collect the rain water falling on a building with a 300 square meter roof area. There are 2 warehouses with a volume of 3 cubic meters each. Residents use the harvested rain water for garden irrigation and cleaning of the site and apartment.

## IZTARIM People's Butcher is Widespread

People's Grocery Stores, opened by IMM in different parts of the city to deliver healthy, cheap and reliable food to the public, were renewed with the "People's Butcher" sections. IMM President Tunc Soyer visited the branch of People's Butcher, which brings healthy and affordable meat together with the people of İzmir, in Bornova Erzene and met with the citizens shopping. President Tunc Soyer, who received information from Murat Onkardesler, General Manager of IZTARIM, stated that prices will not be increased during Ramadan and said, "We want to bring our citizens together with meat at reasonable prices. That's why there's the People's Butcher. We will expand it all over Izmir".





## Economics Congress of the Second Century: Türkiye Will Grow With Its Genetic Codes



Farmer Meetings



We are satisfied with each other

Meetings of Industrialists,  
Traders and Artisans

Doğamıza Dönüyoruz



We Understand Our Past



Workers Meetings



We see the future

The Second Century Economics Congress, which called on all of Türkiye to build the future with the slogan of "Invitation to Innovation", opened its doors in Izmir, for seven days on March 15-21, at the Ahmed Adnan Saygun Art Center (AASAC).

The Economics Congress of the Second Century, attended by nearly 80 experts in their fields, started with the concert given by the famous artist Karsu in memory of those who lost their lives in the 6 February earthquakes. The opening speech of the congress, hosted by Melisa Sozen and Mert Firat, was made by İzmir Metropolitan Municipality Mayor Tunc Soyer. Expressing that a fair, free, prosperous and democratic Türkiye has been re-established, President Soyer said, "We will get out of this wreckage and establish that magnificent country again. We succeeded, we will work hard, we will succeed again."

Non-governmental organizations, trade unions and professional organizations operating all over Turkey, representing the workers, farmers, industrialists, merchants and artisans of our country, came together in Izmir to shape the economic policies of the Second Century of our Republic.



The Economics Congress of the Second Century, a civil, transparent and fully participatory initiative, ended on March 21. After an intensive eight-month program, the final declaration, in which the outputs of all studies were collected, was submitted to the votes of the delegates. The purpose of the declaration is to lay the foundations of the economic policies that will shape Türkiye's new century.

In the final declaration, in the labor meeting declaration about job security and union organization, working life, employment and social policy and special arrangements, in the farmer's meeting declaration about protection and development of agricultural gene resources, product planning and irrigation, organization of the producer, protection of food production areas, sales and marketing, agricultural logistics and warehousing, education and innovation in agriculture and agro-tourism, in the declaration of meeting of industrialists, traders and artisans about digitalization and data management, planning, harmony with nature, management of human mobility, capacity development, thought-based manpower and new professions, new generation competition, entrepreneurship, international networks and tourism and energy was announced by taking decisions.





**The decaying viewing terraces in Konak are being dismantled**



Izmir Metropolitan Municipality started the dismantling of the three viewing terraces between Konak Pier and Passport Ferry Pier, which put the life and property safety of citizens at risk by rotting under the influence of sea

**4 more stops to İZBAN**



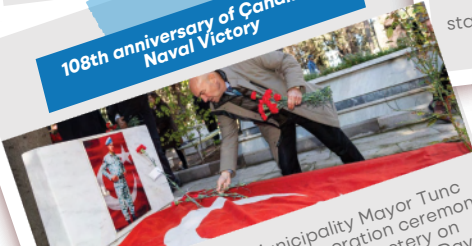
Izmir Metropolitan Municipality started to work to add 4 new stops to İZBAN in three districts. In February, it went out to tender again for Katip Celebi University stations in Lale Mahallesi and Cigli in Konak. Izmir Metropolitan Municipality started negotiations with TCDD for Koyunderi and Asarlik stations in Menemen.

**"The power of Izmir is behind you"**



Izmir Metropolitan Municipality Mayor Tunc Soyer met with members of the press in Tuysuz Village, after visiting villages in Osmaniye.

**108th anniversary of Çanakkale Naval Victory**



Izmir Metropolitan Municipality Mayor Tunc Soyer attended the commemoration ceremony held in Kadifekale Martyrs' Cemetery on the occasion of the 18 March Martyrs' Day and the anniversary of the Çanakkale Naval Victory.

**Izmir Metropolitan Municipality established a field hospital with mobile operating room in Hatay**



Izmir Metropolitan Municipality Hospital completed the installation of the field hospital in Hatay. From x-ray to analysis, from dental diseases to the operating room, all the facilities in Izmir were moved to Hatay.

**IMATECH - Industrial Production Technologies Fair opened its doors**



Bringing together the machinery and production sectors, IMATECH - Industrial Production Technologies Fair opened its doors in Izmir.

**March 8 celebration in tent city**



Izmir Metropolitan Municipality, which established a tent city in Hatay after the disaster that occurred on February 6 and caused great destruction, did not leave the women living in the region alone on March 8. Metropolitan teams gave packages containing their basic needs to women living in both tent cities and villages.

**IMM staff donated blood to earthquake victims**



Taking action to support Tunc Soyer's call to meet the blood needs of earthquake victims, IMM cooperated with the Red Crescent. IMM employees donated blood at the Red Crescent blood donation center for the injured as well as aid activities to the disaster area.

**"Esrefpaşa Hospital writes a completely different story"**



Izmir Metropolitan Municipality Mayor Tunc Soyer said that they fulfill a very important function in the field of health as a municipality with the home care services they have spread to 30 districts.

**Izmir got full marks**



Hosting a European Cup series 15 years later, Izmir Metropolitan Municipality received a passing grade from the International Wheelchair Basketball Federation for EURO CUP 2.





## Izmir Aims to Create Synergy for European Union Missions

Izmir continues to take steps towards the 5 European Missions put forward by the European Commission, which offer innovative and radical solutions to global problems. IZENERJI Inc. After being selected for the Climate Neutral and Smart Cities and Climate Change Adaptation Mission, it is aimed to create a strong synergy between the missions by focusing on Soil Health and Food, Restoring Our Oceans and Waters and Cancer Mission. The titles targeted by the newly focused Missions are shared below:

### Soil Health and Food Mission:

- Reduce desertification
- Maintaining soil organic carbon stocks

•Stop soil sealing and increase urban land reuse

• Maintaining soil organic carbon stocks

• Stop soil sealing and increase urban land reuse

• Reduce soil pollution

• Improve restoration prevent erosion

• Improving soil structure to increase soil biodiversity

• Reducing the EU's global footprint on land

• Developing land literacy in society

### Mission to Restore Our Oceans and Waters:

•Protect and restore marine and freshwater ecosystems and

biodiversity in line with the EU Biodiversity Strategy 2030;

•To prevent and eliminate pollution of the oceans, seas and waters in line with the EU Action Plan towards Zero Pollution for Air, Water and Soil;

•To make the sustainable blue economy carbon neutral and circular in line with the holistic vision embodied in the proposed European Climate Law and Sustainable Blue Economy Strategy.

### Cancer Mission:

•Understanding cancer

•Developing prevention and early detection methods

•Developing diagnostic and treatment methods

•Improving the quality of life for patients and their families

## NetZeroCities Pilot Cities Call Results Announced:



Launched by NetZeroCities to test new approaches to achieve climate neutrality goals in Europe, the Pilot Cities Programme, which is in line with the mission objectives, includes all EU Member States and Türkiye that want to carry out pilot project activities focused on system innovation for two years. The results of the call, which is open to all cities and municipalities in the countries, have been announced.

Among 103 applications, including 159 cities from 33 countries, the applications of 53 cities from our country, including İstanbul, were entitled to be supported.



The Climate Neutral and Smart Cities Mission put forward by the European Commission offers cities an important opportunity to choose a radical and innovative path. The Commission aims to accelerate the climate neutral transition by identifying 112 pioneer cities that aim to be climate neutral by 2030. Mission cities are expected to establish an urban alliance towards the goal of climate neutrality and become important centers of experience of this transformation. The Commission will continue to support Mission cities financially, technically and politically throughout this process. Since being chosen as the leading city, Izmir has been continuing its climate neutral journey with great devotion.





## Türkiye'de Bir İlk!



İzmir Büyükşehir Belediyesi 30 İlçemiz ile Birlikte SECAP Raporlarına Sahip İlk Kent Olma Hedefiyle Çalışıyor.

### Tüm İlçe Belediyeleri İçin Sürdürülebilir Enerji ve İklim Eylem Planı!

#### İZMİR BÜYÜKŞEHİR BELEDİYESİ TÜRKİYE'DE İLK DEFA GERÇEKLEŞTİRİLECEK VE DİĞER ŞEHİRLERE ÖRNEK OLACAK BİR ADIM ATARAK İZMİR İLÇE BELEDİYELERİNE SECAP HAZIRLIĞI EĞİTİMİ, İÇERİK VE YÖNTEM DESTEK PROGRAMINI BAŞLATIYOR.

- ✓ Toplumsal İklim İttifakını güçlendirecek,
- ✓ Her İlçe belediyesi ile Büyükşehir Belediyesi arasında ortak bir SECAP sinerjisi yaratacak,

- ✓ İzmir ve ilçeleri arasında temel raporlamalara, iklim hedeflerine ilişkin tutarlılık sağlayacak,
- ✓ Belediyelerin iç ve dış kaynaklı finansman ve fon desteklerine daha kolay erişebilmesine imkan sağlayacak.

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Aytekin Sozen, IMM Education Coordinator, stated that the earthquake was the main agenda item, but because it is an important study that needs to be focused on at an advanced scale, the introduction of the 'İzmir District Municipalities SECAP Training and Support Program', conducted by IZENERGY INC, was also included. IZENERGY INC EU Projects Officer, Berkay Yılmaz, conveyed the Program's steps taken so far in İzmir's way of becoming a climate resilient city and its connection with the EU Climate Neutral and Smart Cities Mission. The general framework for the program was announced for the first time at the meeting.

## “İzmir District Municipalities SECAP Training and Support Program” was presented at the first meeting of İzmir Local Administrations Education Board:

In order to coordinate the inclusive and supportive education activities carried out by İzmir Metropolitan Municipality and district municipalities, to carry out their implementation in a qualified manner and to ensure inter-institutional coordination, on February 27, 2023, between 09:30 and 14:00, by the IMM Human Resources and Education Department, the first İzmir Local Administrations Education Board Meeting was held. At the center of the meeting agenda was the discussion of educational activities for earthquake survivors who came to our city due to the natural disaster experienced by our country.

In addition, IZENERGY EU Projects Officer Berkay Yılmaz gave a brief briefing on the 'İzmir District Municipalities SECAP Training and Support Program' and invited all district municipalities to be a stakeholder in the program.

In addition to district mayors and representatives of relevant units, officials from IZELMAN INC Department of Health Affairs, Department of Social Projects also attended the meeting.



After the opening speech of IMM Secretary General Barış Karacı, IMM Education Coordinator Aytekin Sozen took the floor. It was stated that after the earthquake disaster, IMM was in a position to cover the wounds, and it was predicted that many earthquake victims from the earthquake region would come to İzmir permanently. After hearing the experiences of the authorities working in the earthquake area, the Community Health and Education Branch Directorate talked about the health services provided for the citizens and officials affected by the earthquake and the general framework of the Multi-Training Program they implemented. Authorities from Ahmet Pirstina City Archive and Museum (APIKEM) and IZELMAN INC Kindergartens Directorate shared their contributions to education in their presentations.



IZENERGY INC EU Projects Officer Berkay YILMAZ

## International Awareness of Earthquake Disaster in Brussels

In order to increase the impact of the campaign carried out in Turkey with the European Commission and the European Parliament, with the participation of IZENERGY Chairman of the Board Ercan Türkoğlu and the meticulous work of Isil Ergec from IMM Brussels Izmir House IZENERGY, with the meeting program prepared, meetings were held with many authorized bureaucrats and representatives between 27-28 February.

In the accompaniment of the prepared documentary film, the impact area of the earthquake disaster in our country, its severity and the material and social destruction it caused were explained.

The interviewed officials stated that the earthquake disaster was much more effective than the previous examples, that the loss of life and property was at an extraordinary scale, and that international support programs would be delivered to the region effectively.

It was stated by the authorities that the aid will be used by international NGOs and in cooperation with Central Government units.



*Eurocities*

*Secretary General - Andre SOBZAK Brussels Izmir House - Isil ERGEC Communication Specialist - Daniela Berretta*



*Deputy Head of Türkiye Unit of the General Directorate of Neighborhood and Enlargement Negotiations Katarzyna MARZEC*

*Sweden's Permanent Representation to the EU (2023 Swedish Presidency of the European Council), Foreign and Security Policy Department Middle East Affairs Foreign and Security Policy Advisor (MaMa Delegate) - Ewa NILSSON*

*Türkiye / Southeast Europe and Eastern Neighborhood Refugee Humanitarian Aid Desk Officer within the scope of the tool - Eva PUHAR*



*European Commission (EC), DG Climate Action (DG CLIMA) Deputy Director General & Climate Adaptation Task Manager - Clara DE LA TORRE Brussels Izmir Evi - Isil ERGEC*



*Member of the European Parliament, Permanent Rapporteur of Türkiye Nacho SANCHEZ AMOR*



*Citizenship, Governance, Institutional and Foreign Relations Commissioner - Delphine Langlois CIVEX*



*Member of the European Parliament (MEP) (S&D, Germany) - Ismail ERTUG*



# Cost-Free SPP Projects Begin with IZGUNES

IZENERGY INC Energy Services started its work with the coming of Izmir Metropolitan Municipality Mayor Tunc Soyer. Necessary studies have been carried out within the scope of Izmir Green City Action Plan, Izmir Sustainable Energy and Climate Action Plan and Izmir's Strategy for Living in Harmony with Nature, and it has been ensured that Izmir is among the 112 cities selected by the European Union in line with the 2030 Climate Neutral target. IZENERJI INC produces projects for the supply of renewable energy sources for the annual energy consumption of approximately 600.000.000 kWh, which is consumed by Izmir Metropolitan Municipality, its subsidiaries and affiliate companies. IZENERGY INC, which continues its works not only in the project preparation process but also in the financing and construction works, has established IZGUNES INC in cooperation with the private sector in this context.

## TIRE GAZI MUSTAFA KEMAL ATATURK STADIUM SPP PROJECT



## IZMIR METROPOLITAN MUNICIPALITY FOCA MUNICIPALITY IZDOGA INC- BAYSAN INC – IZENERGY INC ENERGY, AGRICULTURE AND LIVESTOCK LAND SPP PROJECT



- Bayrakli Pumping Station (184.7 kWp)
- Karsiyaka Pumping Station (189.6 kWp)
- Customs Pumping Station (71.1 kWp)
- Cigli Pumping Station (148.125 kWp)
- Karsiyaka T1 Water Tank (1044.32 kWp)
- Bornova T7 Water Tank (291.04 kWp)
- Bornova T41 Water Tank (436.56 kWp)
- Buca T18 Water Tank (385.2 kWp)

IZGUNES INC works to ensure that the Unlicensed Electricity Generation projects prepared for the self-consumption of Izmir Metropolitan Municipality, its subsidiaries and affiliate companies pay for itself with savings without the need for investment capital. In our country, known as ESCO in the world, it is aimed to implement the projects without spending from the investment budget of the Izmir Metropolitan Municipality, with the method determined by the Energy Efficiency Law and the Energy Performance Contract in the Public Sector legislation. In this context, necessary studies have been initiated for energy audits of buildings that consume energy, and it is aimed to implement SPP projects as an energy efficiency measure.

## 4 WASTEWATER PUMP STATIONS OF IZSU GENERAL DIRECTORATE+ 4 WATER TANK GES PROJECT



First of all, the tender for the 4 Wastewater Pumping Station + 4 Water Tank SPP Project of the General Directorate of IZSU was participated, the tender was won, and the contract was signed. Within the scope of this tender, belonging to the General Directorate of IZSU:

A total of 2,750,64 kWp SPP power plant will be installed and put into operation.

Participation in the tender for the Tire Gazi Mustafa Kemal Ataturk Roof GES Public Energy Performance Contract published by the Tire District Municipality continues. In this study, Tire District Municipality will own the GES Facility without paying any initial investment and will receive at least 10% of the savings to be achieved for 10 years. After 10 years, the facility will completely belong to Tire District Municipality. This study is also an exemplary study in terms of being the first Roof SPP EPS model applied in Türkiye.



## Izenergy Inc Annual General Meeting Was Held

IZENERGY INC General Assembly convened on 29 March 2023 under the Coordination of Companies. The company's annual report and financial reports were presented at the General Assembly. IZENERGY INC 2023 board of directors was determined unanimously by the General Assembly. We are confident that our company will have a successful year.

Ali Ercan Turkoglu	Chairman of the Board
Alim Murathan	Deputy Chairman of the Board of Directors
Hasan Tahsin Kocabas	Board Member
Yusuf Incili	Board Member
Haluk Karabulut	Board Member
Ayşe Arzu Ozcelik	Board Member
Figen Seyis	Board Member
Nefise Meltem Turgut	Board Member
Gulfem Saydan Sanver	Board Member
Kader Sertpoyraz	Board Member
Tayfun Ilhan	Board Member

## Hamburg Meeting for the "Best State" of Energy



Negotiations for clean energy continue within the scope of the BEST FOR ENERGY PROJECT on energy clusters, renewable resources and new technologies, carried out in partnership with IZKA / ENSIA. The delegation, which also included Ali Ercan Turkoglu, Chairman of the Board of Izenergy, met with the leading companies of the energy sector in Hamburg on 06-10 March 2023. During the meetings, information was shared on wind and hydrogen energy as well as waste recycling, energy storage systems, technology centers and energy campuses.

## Urban Consolidation for 2030 Goals

Within the scope of the Climate Neutral and Smart Cities Mission, Izmir, which has increased its zero carbon target from 2050 to 2030, aims to lead other cities by realizing its projects within the body of IZENERGY INC. With the participation of universities, professional chambers, associations, non-governmental organizations, the private sector and all stakeholders of the city, the works and projects carried out in line with the goal of making Izmir climate neutral, Mr. Ercan Turkoglu shared in his interview published on the Clean Energy News Portal.



## “We Will Make Izmir the Capital of Clean Energy”



Within the scope of the Regional Energy Systems and Energy Efficiency seminar organized by the Danish Embassy, Danish Consul General in Istanbul Thierry Hoppe visited Tunc Soyer. At the seminar, our Chairman of the Board of Directors Ercan Turkoglu said, “This event has been postponed twice, but we have been in contact for more than a year. We made technical visits to Denmark. We invited them to Izmir. As the municipality, we want to facilitate the decision-making process and taking action in their investments.”

## Izenergy INC Staff

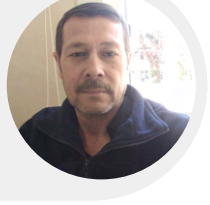


**Askin KESKEK**

I was born in 1991 in Tunceli. I am married and have a daughter. I went to primary school in Pertek Boarding Primary School. I graduated from Open Education High School. I came to Izmir in 2008 and joined the Izenergy family in 2018. I work in the Road Sweeper Unit. I would like to thank Izenergy for my work that I love to do.

Hello, I am Nazmi, I was born in 1976 in Manisa Kula. Since 2011, I have been working as a park and garden employee at Izenergy company. I am very pleased to work with our President Mustafa Tunc SOYER. I am very glad to be in the Izenergy family. Thank you to all my colleagues.

**Nazmi AGIRBAS**



**Menevse KESER**

In 2022, I started my working life in IZENERGY Administrative Affairs Directorate. I think that the way to lead a peaceful and happy life is through business life, so I feel very lucky to be part of Izenergy.

I was born in 1982 in Izmir Bergama. I am married and have 2 children. I am a vocational high school graduate. Since 2016, I have been working as a cleaning staff in Izenergy Inc. I am happy and proud to be a part of Izmir Metropolitan Municipality and Izenergy Inc family.

**Ozgur GUNES**



**Bulent CETIN**

I was born in 1978 in Tunceli. I am a primary school graduate. I am married and have 2 children. I have been working in Izenergy Road Sweeper Unit since 2017. I am a member of the Disciplinary Committee at Syndicate No. 2. I would like to thank the management of Izenergy and all my colleagues.

I am Zahide, I was born in 1979 in Bingol. I am a graduate of open education high school. I am a mother of two children. Since 2017, I have been working as a vacuum cleaner in the City Cleaning Chief. I am honored and happy to do something for Izmir. I would like to thank Izenergy management and all my colleagues.

**Zahide GOZE**



**Gorkem TANIR**

I was born in 1992 in Izmir. I completed my undergraduate education at Dokuz Eylul University Civil Engineering Department in 2017. I completed my master's degree in the field of Hydraulics and Water Resources in 2020. I am working as a Civil Engineer at the Water Resources Research and Application Center.

Hello, I am Songul, I am married and mother of 2 children. I joined the Izenergy Inc family in 2018. I work as a broom worker in the City Cleaning Department. Thanks to our President, Tunc SOYER, who brought the employment of women to the forefront in every unit. Everywhere a woman touches; it will also raise the consciousness of labor, freedom and beauty to the future.

**Songul YILDIZ**



**Derya CANGUDER**

I was born in 1977 in Ereğli. I completed my secondary education at Karadeniz Ereğli Atatürk Secondary School. I am a mother of two girls. I joined the Izenergy family in 2017. I work in the Solid Waste Road Sweeping Unit. I am honored and proud to serve our Izmir. I would like to thank Izenergy management and all my colleagues.

I was born in 1977 in Ereğli. I completed my secondary education at Karadeniz Ereğli Atatürk Secondary School. I am a mother of two girls. I joined the Izenergy family in 2017. I work in the Solid Waste Road Sweeping Unit. I am honored and proud to serve our Izmir. I would like to thank Izenergy management and all my colleagues.

**Dilek KUZU**



**Gozde AYAN**

Since 2018, I have been working as a cleaning staff in the Fire Brigade Training Branch Directorate in the Department of Headman's Affairs in the staff of IZENERGY INC. I am very happy to show the power of women in Izmir Metropolitan Municipality and IZENERGY INC family and I feel very lucky.

Since 2014, I have been working as a cleaning staff in the Department of Mukhtar Affairs in the staff of IZENERGY INC. I am very happy to work in Izmir Metropolitan Municipality and Izenergy INC family and I feel very lucky.

**Sefik YEL**





“ We stand by our earthquake victims with the movement of hope ”

**Tunc SOYER**  
Mayor of Izmir Metropolitan Municipality



İZMİR METROPOLITAN MUNICIPALITY



“ A brand new era begins, which these lands are longing for... ”

**Tunc SOYER**  
Mayor of Izmir Metropolitan Municipality

📍 Sirince



  
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