

# KEY POINTS

## EDITORIAL

The Sovereign Prince has been a driving force at the highest level in response to the climate challenge, setting ambitious goals for reducing our **greenhouse gas (GHG) emissions by -55% by 2030, to achieve carbon neutrality by 2050.**

The latest figures for 2021 (National Inventory Report 2023 – UNFCCC – Department of the Environment) indicated a **decrease in our emissions of -28.1%** (compared with 1990). We therefore need to act more quickly to meet our objectives. There are solutions (ocean thermal energy, heat pumps, electric vehicles, reducing waste at source, etc.) and public funds are available. Now we need to up the pace of mobilisation and the Monegasque community needs to embrace the support on offer.

The **National Pact** continues to mobilise businesses in implementing practical actions to promote the energy transition in the three areas with the most impact: energy use in buildings, waste and transport. It had 390 signatories at the end of 2023 and 46 of them have called for help from businesses to implement tangible projects to reduce their emissions.

2023 also saw the continued deployment of **ocean thermal energy loops**, with public and private-sector buildings connecting to them, helping to reduce their own emissions by 80% and -7% at the national level. Knowledge of the subsidy available for replacing collective boilers with heat pumps is beginning to spread.

The **National Energy Efficiency Plan** agreed at the end of 2022, combining actions and subsidies aimed at both reducing consumption and maintaining the purchasing power of Monegasque residents and businesses, has involved all key actors in the Principality. As a result, the Monaco Electricity and Gas Company (SMEG) has seen a 10% fall in consumption since the end of 2022.

**Building renovation** is a necessity but is struggling to gain traction in a context that still needs incentives, hence the importance of supporting property managers who manage the buildings that emit the most greenhouse gases as a priority.

Energy transition actions are led by the teams at the Ministry of Public Works, the Environment and Urban Development; the role of the Mission for Energy Transition is to coordinate and promote these actions to accelerate progress.

Annabelle Jaeger-Seydoux, Director

# 2023 ANNUAL REPORT

## 2023 ENERGY TRANSITION HIGHLIGHTS

### ***In construction:***

- Promotion of the new financial support for installing heat pumps to supplement existing schemes (such as replacing windows, insulating roofs, calls for exemplary renovation projects, etc.) through a series of meetings with key players in the construction sector.
- Mobilisation around the National Energy Efficiency Plan, including visits to 85 shops, meetings with businesses and workshops with individuals.
- The BD2M initiative is progressing well, with 32 registered projects or plans, three assessment commissions and three training sessions (green roofs, energy management and air quality).
- Continued development of the two ocean thermal energy loops (Larvotto and Condamine).
- Ongoing analysis of audits in the private sector, with a total of 600 audits by the end of 2023 and €3M in public money.
- Four projects have been awarded an exemplary renovation grant, including the Villa Duo in the amount of €430,000, i.e. 50% of the cost of the works. Two projects are at the planning stage.
- Two privately owned buildings (including one co-owned property) are currently being renovated by adding external thermal insulation, thus setting an example.

### ***In transport:***

- Over 16% of vehicles in Monaco are powered by clean energy (7.6% electric / 8.5% hybrid).
- Broadcast by Monaco Info of the “Sharing is caring” clip with Lucas di Grassi (Formula E World Champion 2016/17) on responsible use of public charging points (400 Monaco On charging points at the roadside and in car parks).
- Widespread use of car sharing with the Klaxit by Blablacar app and mobilisation of businesses that have signed the Pact: at the end of 2023, an average of 15,000 journeys a month was funded by the Government of Monaco.
- Continued coaching for 24 establishments in monitoring the Business Travel Plan (PDE – *Plan de Déplacement d’Entreprises*).

### ***In waste:***

- Establishment of MaConsigne, with 23 collection points and 36 partner sales outlets.
- Promotion of effective new bans as part of the regulations aimed at achieving zero waste from single-use plastics by 2030.

### ***With the Monegasque community:***

- Gathering of stakeholders during the Annual Energy Transition Conference and award of the Transition Prizes.
- Financial support for businesses embarking on their energy transition: €447,000 awarded to 31 businesses, associations or institutions by the end of 2023 (out of 46 applications).
- Themed workshops on energy efficiency and electric vehicles.
- Launch of the National Pact aimed at the administrative authorities.
- 18 workshops held in schools to raise awareness among young people.
- MTE participation in multiple events (EVER Exhibition, Riviera Electric Challenge, Monaco Business Exhibition, European Week for Waste Reduction, WRC Innovation Forum, Monaco Hydrogen Forum, Monaco Matin Eco Club Award, Business Start-up Competition run by the Monaco Junior Chamber).

## ENERGY (33% of direct emissions)

### OUR MEANS OF ACTION

- Close collaboration between departments: analysis of BD2M permit applications and external insulation plans with the Department of Forward Studies, Urban Planning and Mobility; incorporation of BD2M into contracts and projects with the Department of Public Works; and cross-cutting BD2M issues, hydrogen and renovation projects with the Department of Health Affairs, the Department of Urban Amenities, the Fire Service and the State Property Authority.
- Financial support for energy audits of private buildings: nearly 60% of private buildings have been audited and have received grants.
- Monitoring of energy use in the most energy-intensive buildings using SMART+ and SMEG (more than 100 sites have been equipped, representing 29% of Monaco's total consumption).
- Ongoing information and support for property managers to assist them in their work, subsidies for energy change, individual meetings prioritising the buildings that emit the most greenhouse gases.
- Advice to businesses and individuals to help them manage their energy consumption.

### BÂTIMENTS DURABLES MÉDITERRANÉENS DE MONACO (BD2M) INITIATIVE

- Green roof and air quality initiatives (47 participants on average).
- An Energy Efficiency workshop with 23 participants from different companies, representing 75% of heating / air conditioning / ventilation businesses in Monaco.
- Field visits, for example to the Heliport to examine its external insulation (35 participants).
- Three BDM/BD2M Assessment Commissions (between 150 and 200 participants / commission).
- 20 public and private construction or renovation projects registered with the initiative.
- Monthly Envirobat expertise days.
- Morning event for coaches to enable sharing and ongoing improvement of the initiative.

### RENEWABLE ENERGY IN MONACO

- The deployment of two ocean thermal energy loops in Larvotto and La Condamine continued in 2023. Key moments: connections to Le Formentor, Houston, Columbia and the Bahia Testimonio II towers. L'Estoril, which was connected in 2022, began its second season of heating with the loop.
- With regard to solar energy in Monaco, public buildings still have pride of place, thanks to the work of the Public Buildings Maintenance Office, which continues to install solar panels on public buildings, with more than 5,540m<sup>2</sup> in operation, equal to 1,285 MWh of production and 99 tonnes of CO<sub>2</sub> emissions prevented.
- Monaco Renewable Energies: the deployment of in-house projects such as the one in Levens (06) continued in 2023, in addition to the 15 solar farms and three active wind farms owned by Monaco Renewable Energies (M.E.R.), which together produce 193.8 GWh per year, or the equivalent of 38.4% of the Principality's electricity consumption.
- In all of these areas, the Mission for Energy Transition is supported by the competitiveness cluster Capenergies to actively monitor the technology of emerging solutions in partnership with Accenture.
- Along with SMEG, it co-leads the Monaco Member Committee of the World Energy Council.

## TRANSPORT (35.5% of direct emissions)

### SUSTAINABLE MOBILITY IN MONACO

- At the end of 2023, as the result of a policy to promote electric transport launched in 1994, clean-energy vehicles made up nearly 16% of the vehicle fleet (7.6% electric vehicles and 8.5% hybrid vehicles).
- Between 2018 and 2023, nearly €30 million from the National Green Fund was devoted to subsidising the energy transition for vehicles.
- With nearly 400 electric vehicle charging points rolled out in public car parks and on the streets as part of Monaco On, 2,000 tonnes of CO2 emissions were prevented in 2023.
- Klaxit Blablacar Daily, the home-to-work car-sharing app, is celebrating its third year in Monaco. The figures speak for themselves: at the end of December 2023, more than 9,000 people had signed up, there were 5,160 active car sharers and 264,000 journeys were completed – covering 6M kilometres and reducing CO2 emissions by 717 tonnes!
- The MTE leads the Clean-Energy Vehicles group to advance discussion on electric transport.
- MC Hydrogen Working Group: participation in the round table co-organised by the Yacht Club de Monaco, Prince Albert II Foundation and Mission for Energy Transition on 7 July. The aim was to enable the development of hydrogen for maritime use. Participation in the Innovation Panel of the Monaco Hydrogen Forum (27 and 28 November).
- Monitoring of the Business Travel Plans presented in 2022 concerning 24 establishments (19 interviews and promotion and sharing of best practices).

## WASTE (28.8% of direct emissions)

### TARGETING ZERO SINGLE-USE WASTE IN THE PRINCIPALITY

- A return scheme for takeaway containers has been introduced in the Principality to combat single-use plastic. MaConsigne has 23 collection points and 36 partner sales outlets, all driven by the energy of the operator, Lemniscate, to persuade people to take action.
- Organisation of an inter-business challenge during European Week for Waste Reduction on using MaConsigne.
- Work with businesses / bodies that have signed the National Energy Transition Pact to raise their awareness of MaConsigne (SBM Offshore, MC Télécom, MES, Grimaldi Forum, CSM, etc.) as well as with the administration (DAI, Tourist and Convention Authority, Cultural Affairs).
- Leadership of the Waste working group (Ministry of Public Works, the Environment and Urban Development, Tourist and Convention Authority, Monaco City Hall, SMA, Société d'Exploitation des Ports de Monaco).

## PROGRESS OF THE NATIONAL PACT

Since the Pact was launched, the number of signatories has continued to increase, from a total of 233 members at the end of 2021 to 390 at the end of 2023. The Athletics Federation, Association of Guides and Scouts of Monaco, the transport firm WES KOBIA INTERNATIONAL, Barclays Bank, DEP Construction Monaco and Monaco Digital were among the signatories in 2023.

Overall, the Pact was supported by 237 organisations (and 1,820 individual signatories) in 2023. According to feedback from the signatories, membership of the Pact has helped organisations to make progress thanks to ideas for actions (mentioned 115 times), the motivating effect of taking part in a government programme (94 mentions) and helping to raise awareness among their teams (89 mentions). Only 10 organisations indicated that the Pact had not helped them to progress.

Actions under the Waste and Energy headings have been better implemented than Transport actions. The three best-implemented actions are: the installation of LED light bulbs, making bottles/carafes, reusable glasses and a dishwasher available to employees, and setting up a waste-sorting system.

The main obstacles to implementing actions are: a lack of time and human resources (370 mentions), a lack of budget (276 mentions) and limited demand from customers (194 mentions).

Launched in May 2021, financial help for businesses that have signed the Pact to support their energy transition was offered to 31 projects (out of 46 applications). The total amount of subsidies granted since 2021 is €446,744.20. Most of the subsidised projects came under the “Energy” heading (11 projects out of 31 submitted), followed by “Carbon assessment or life-cycle analysis”. Two examples are: the replacement of a refrigeration unit for a Monegasque fishmonger with a model that consumes less electricity and uses a new-generation refrigerant gas, and a project to install LED lighting at a firm’s premises.

Working in partnership with the Business Development Agency, Monaco Boost and Monaco Tech, 20 start-ups that have signed the National Pact finalised their low-carbon action plans in 2023, supported by three workshops delivered by a specialist provider.

The Mission for Energy Transition is also a partner of the Monaco Economic Board for the Monaco Matin Eco Club awards and sits on the jury for the Junior Chamber International Monaco Business Start-Up Competition.

In the public sector, the National Pact aimed at the administrative authorities was launched by the Minister of State on 3 February; 30 departments have since signed up. Individual meetings are being organised with each of them.

## OUR EVENTS (42)

- Attendance at the Monaco Eco Club on energy efficiency for businesses (16 January 2023)
- WRC Innovation Forum: presentation on electric transport in Monaco (20 January 2023)
- Annual Energy Transition Conference (24 January)
- Launch of the National Pact aimed at the administrative authorities (3 February)
- BD2M: BDM/BD2M project assessment commission (9 February)
- Energy Transition Conference with Women Business Leaders (28 February)
- Energy Transition Conference with Women Leaders (28 February)
- Energy efficiency workshops in schools (27/28 February)
- Promotion of MaConsigne as part of MonaCollecte (3 March 2023)
- Workshop for individual signatories - Eco-friendly digital technology (24 March)
- BD2M: visit to the Heliport by property managers and businesses to view its external insulation (15 March)
- BD2M: green roofs training session (30 March)
- First workshops to support low-carbon initiatives for start-ups by Monaco Boost (24 and 25 April)
- First workshops to support low-carbon initiatives for start-ups by Monaco Tech (2 May)
- Formula E, Change – Accelerated Live Forum: participation by the MTE to present Monaco On (4 May)
- Ever Exhibition: presentation of Monaco On charging points (11 and 12 May)
- Workshop for individual signatories – Putting the brakes on fast fashion (17 May)
- Workshop for individual signatories – Be a change-maker (5 June)
- Second workshop to support low-carbon initiatives for start-ups by Monaco Boost (6 June)
- Workshop on sharing good practices with the first signatories of the Pact for the administrative authorities (12 June)
- Energy transition workshops at two daycare centres in Monaco, in conjunction with City Hall (5/7 June)
- BD2M: BDM/BD2M project assessment commission (6 June)
- Second workshop to support low-carbon initiatives for start-ups by Monaco Tech (7/16 June)
- MTE participation in Envirobat 20th anniversary (20 June)
- BD2M: energy efficiency workshop for maintenance companies (22 June)
- Online conference – Electric vs internal combustion vehicles (5 July)
- Monaco Hydrogen Group 4th round table (7 July)
- Circular Economy Fresk with the Monaco Association of Architects (26 July)
- Riviera Electric Challenge: Mission for Energy Transition team finishes first! (13 and 14 September)
- MTE participation in the Property Expert Appraisal in the Principality Conference organised by the French Institute of Expert Property Appraisal (15 September)
- Energy Transition workshop with the Junior Chamber as part of its training programme (19 September)
- Workshop for organisational signatories – Good transport practices (23 September)
- MTE participation in Monaco Business – presentation on support for businesses (3 October)
- BD2M: Air quality training session (6 October)
- Workshop for individual signatories – Energy efficiency (17 October)
- Closing event for low-carbon support for start-ups (17 October)
- Meeting of National Pact Ambassadors with Julien Vidal (19 October)
- BD2M: BDM/BD2M project assessment commission (14 November)
- Energy transition meeting with estate agencies (22 November)
- MTE participation in European Week for Waste Reduction (23 and 24 November)
- MTE participation in the Monaco Hydrogen Forum (27 and 28 November)
- Workshop on sharing good practices with health stakeholders (29 November)

# 2023 ANNUAL REPORT

## OUR COMMUNICATION

Maintaining the momentum in favour of the energy transition by highlighting examples of change in the public and private sectors; showcasing what works to encourage others to act.

### WEBSITES

- **Mission for Energy Transition:** [transition-energetique.gouv.mc](https://transition-energetique.gouv.mc)
  - **MTE newsletter** available on the MTE website and sent to signatories
- **Carbon Coach Platform:** [pacte-coachcarbone.mc](https://pacte-coachcarbone.mc)

### CONTENT CREATED (available on the Mission for Energy Transition and/or Carbon Coach websites)

- **Guidance sheets:** to help you take the Pact actions further
- **Guide to eco-responsible sport**
- **Guide: How to carry out a carbon assessment**
- **Guide: How to carry out a life-cycle analysis**
- **Eco-friendly Digital Technology Charter and Guide**
- **Guide to financial support for building**
- **In progress: Guide to good practices for business travel**

### VIDEOS PRODUCED (available on the Mission for Energy Transition [YouTube channel](#))

- National Pact: 2023 review of signatories
- Key energy transition actions 1026-2023
- BD2M training - Green roofs
- B2DM: Villa Duo interview
- BD2M: Assessment commissions: issues and prospects
- “Testimonial” videos of National Pact Ambassadors (13)
- In progress: Videos on financial support for building

### SOCIAL MEDIA

- **Instagram:** @mte\_monaco - [https://www.instagram.com/mte\\_monaco](https://www.instagram.com/mte_monaco) - 1,900 followers. Coverage: 4,300. Posts: 29; stories: over 500.
- **Facebook:** Monaco Energy Transition - <https://www.facebook.com/MTEMonaco/> 1,452 followers. Coverage: 16,500. Facebook page visits: 3,500. Publications: 375
- **LinkedIn:** Mission for Energy Transition - Monaco <https://www.linkedin.com/company/mte-monaco/> 3,025 followers and 6,900 reactions. Views: 288,500. Posts: 490. Comments: 215. Reposts (shares by other individuals / bodies): 480.

2 new weekly features on Facebook and LinkedIn: “Did you know?” on Mondays and Fridays.

- **YouTube:** Mission for Energy Transition MONACO  
[https://www.youtube.com/channel/UCYVJtw6BVg\\_hpdC9UctKhww/featured](https://www.youtube.com/channel/UCYVJtw6BVg_hpdC9UctKhww/featured)



# 2023 ANNUAL REPORT

## OUR PLANS FOR 2024

- Continue to disseminate best practices and information about financial support for the National Energy Efficiency Plan to individuals and businesses.
- Speed up the renovation of existing stock based on audits and promoting dedicated assistance, and supporting the property managers of the buildings that emit the most GHGs as a priority.
- Support the transition away from the use of fossil gas to heat our buildings, through the provision of financial assistance to install heat pumps and help for individuals to purchase small appliances.
- Pursue the development of the BD2M strategy:
  - Develop the framework on the following topics: eco-materials in tall buildings, implementation on an occupied site, more ambitious incorporation of planting and carbon aspects of the built environment,
  - Deploy the circular economy in the building sector by promoting good practices.
- Monitor the travel plans of businesses that have made a commitment in this area.
- Produce a guide to good transport practices.
- Work with the Department of Forward Studies, Urban Planning and Mobility to develop a travel plan for the administrative authorities.
- Promote the use of returnable takeaway containers to win over new users.
- Develop new aspects of the National Pact: creation of a Level 3 with new actions requiring a greater commitment, roll-out of the Pact for the administrative authorities.
- Support schools that sign the Schools Pact.
- Help 30 new businesses to develop their low-carbon strategies.
- Propose a second round of support for start-ups organised by MonacoTech and Monaco Boost in partnership with the Business Development Agency.

## MTE TEAM

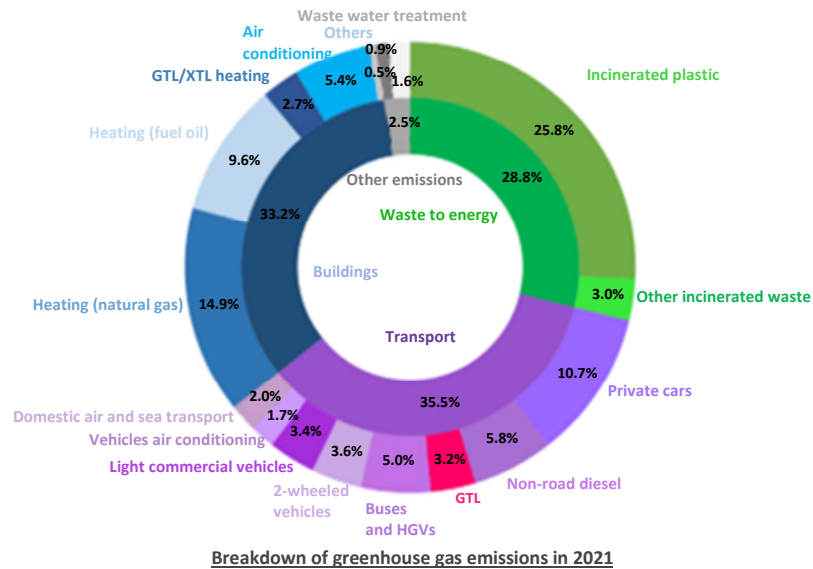
- *Annabelle Jaeger-Seydoux, Director*
- *Arielle Barrabino, Communications Manager*
- *Cécile Biso, Assistant to the Director and the team*
- *Raphaël Carossi, Building Energy Specialist*
- *Isabelle Curau-Bloch, Head of the National Pact Project*
- *Marie-Pierre Fassio, Head of the Buildings and Returnable Container Projects*
- *Géraldine Fievet, Building Energy Specialist, BD2M Coordinator*
- *Virginie Hache-Vincenot, Head of the Energy, Finance and Innovation Project*



# THE ENERGY TRANSITION IN 2023

## Highlights

National Energy Efficiency Plan  
Prioritisation of buildings with the highest emissions  
Annual Energy Transition Conference



## Key figures for the year

9,000

Registered for the Klaxit car-sharing app by the end of 2023, **5,160 active car-sharers** and **15,000 journeys** per month funded by the Government

16.2%

Of the vehicle fleet made up of **clean-energy vehicles** **400 Monaco On public charging points**

MaConsigne collection points  
**36 partner sales outlets**

-10%

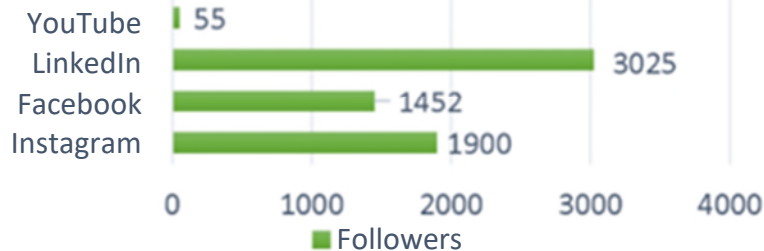
**Decrease in electricity consumption** following the announcement of the National Energy Efficiency Plan  
**Visits to 85 shops**

23

Energy Transition Events, Pact Events, Eco-Friendly Digital Technology, Responsible Procurement, etc.

**42 events organised**

## Our communication



## National Pact

1,889

individuals

1397 tonnes of CO2 reduced per year

394

businesses

- **31** business signatories received financial support for their environmental transition plans (€446,744)
- **20** start-ups implementing low-carbon action plans
- **18** workshops in schools
- Launch of the **National Pact aimed at the Government**

## Sustainable Mediterranean Buildings of Monaco

- 20 public and private projects using the BD2M approach
  - 3 participatory assessment commissions
  - 3** training sessions on sustainable construction and renovation
- In addition, **60%** of private buildings have been audited, along with nearly **80%** of state-owned buildings (housing)
- 4 award-winning** Exemplary Renovation projects
  - First **2** private buildings install external thermal insulation

From 2017 to 2023, **€140 million** invested by the **National Green Fund** in energy efficiency and independence; **€58 million** for ocean thermal energy loops (nearly 50 buildings will no longer depend on fossil fuels);

Almost **€30 million** in support for electric vehicles from 2018 to 2023.