

PRESS DOSSIER

ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

2019

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THE CHAMONIX MONT-BLANC VALLEY: A LABORATORY FOR ENERGY AND ECOLOGICAL TRANSITION

The postcard is beautiful! Majestic mountains, eternal snows, impressive glaciers, remarkable forests, lush mountain pastures, Alpine lakes, natural reserves... The Chamonix Valley is unique and awe-inspiring!

Unique yet fragile, and more sensitive to climate change than other places. Climatic warming is twice as severe as in lowland areas, glaciers are losing depth dramatically, annual snowfall has been halved in 40 years, the risk of rockfalls and landslides is greater and more frequent... The notoriety of the Mont-Blanc Massif means that it is often presented as a laboratory for the analysis of climate change.

Being on the front line in the face of climate change means that we cannot be complacent!

For several years now, the Chamonix Mont-Blanc Valley has been working alongside its many institutional partners and neighbouring border regions to fight for the preservation and protection of its environment, which is home to thousands of residents and the basis of our local economy.

Holder of the TEPOS (positive energy territory) and TEPCV (positive energy territory for the promotion of green growth) labels, the Chamonix Valley adopted the first Climate Plan in a mountain region in 2012 and developed a specific Air Quality Plan in 2015.

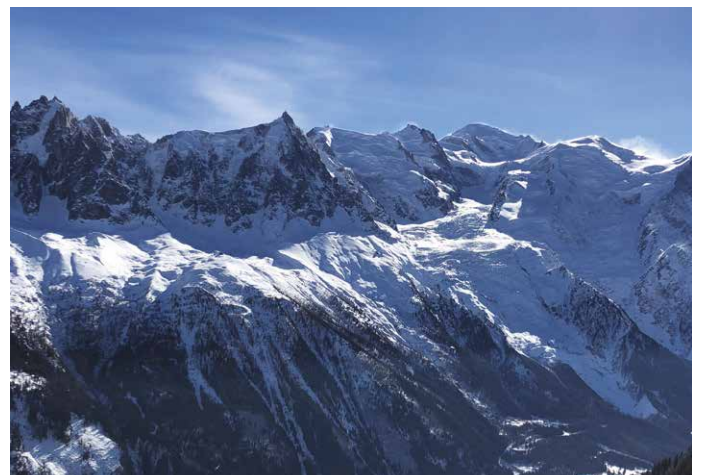
The Valley takes a proactive stance with regard to the development of public transport and soft or electric mobility, it promotes energy-efficient improvements for existing buildings by providing significant administrative and financial support for energy retrofit projects.

The electricity it uses is 100% renewable and public buildings are heated using gas. Hydroelectric power plants are under construction and the development of a methanisation plant, as well as a multi-fuel "green station" will soon be underway.

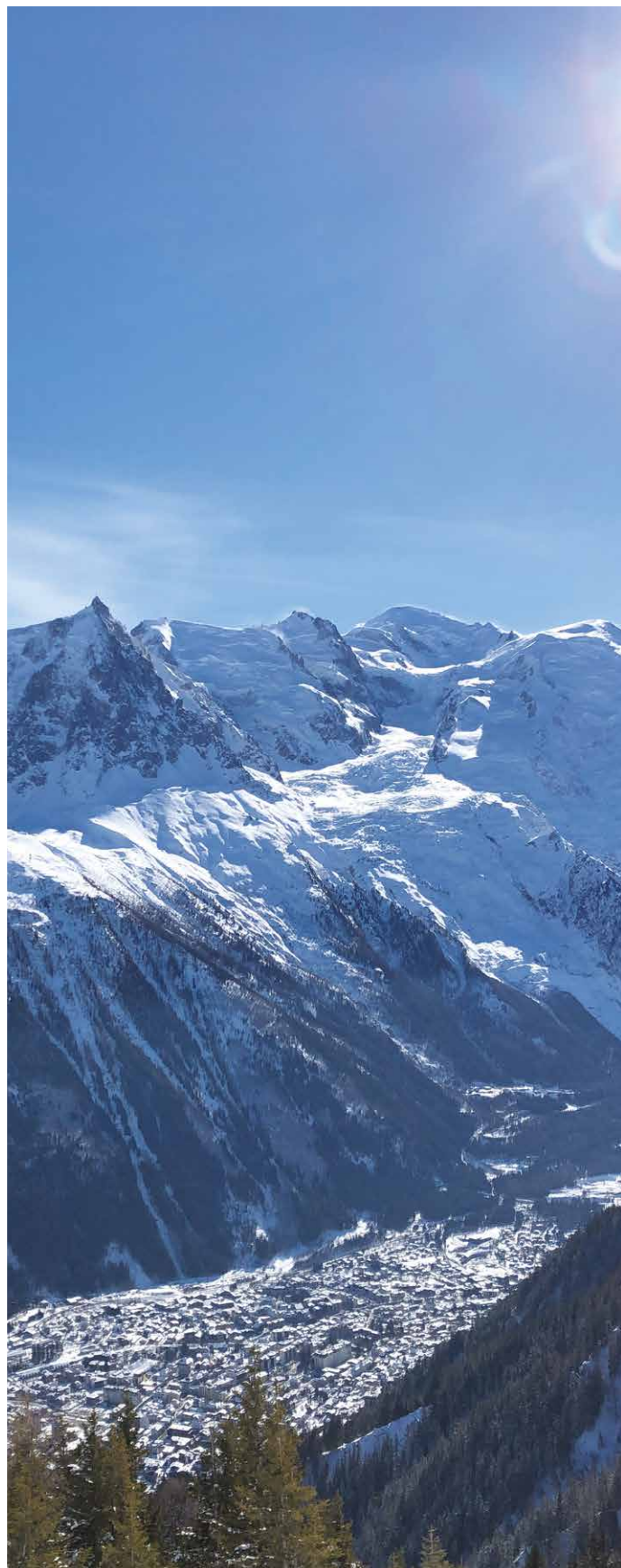
To protect the air we breathe, the water we drink and the exceptional landscapes which surround us is our priority. It is a complex and costly battle which must be fought on multiple fronts. The stakes are high. Public investment is considerable given the size of our community, and annual environment-related expenses are continually on the rise.

Our objectives are clear: to reduce greenhouse gases and air pollutants and to preserve and protect our exceptional surroundings and the inhabitants of the Valley.

Éric Fournier, Mayor of Chamonix-Mont-Blanc and President of the Community of Communes of the Chamonix Mont-Blanc Valley
Jérémy Vallas, Mayor of Vallorcine
Maurice Desailoud, Mayor of Les Houches
Nicolas Evrard, Mayor of Servoz
The Community of Communes of the Chamonix Mont-Blanc Valley encompasses these four municipalities



THE CHAMONIX MONT-BLANC VALLEY: A UNIQUE SITE



The Chamonix Mont-Blanc Valley

We live in a land of extremes: high peaks, imposing glaciers, considerable altitude differences, huge variations in temperature, high exposure to natural risks, an acute sensitivity to climate change and different forms of pollution: the Chamonix Valley is a place unlike any other.

Bestowed with an exceptional geography, the Chamonix Valley lies between two mountain ranges, (the Mont-Blanc and Aiguilles rouges Massifs) and four glaciers, including France's largest glacier, Mer de Glace, with a 2500 m vertical drop.

The Valley extends over about thirty kilometres, from Servoz to Vallorcine via Les Houches and Chamonix. Vertically, it extends over close to 4000 metres. At an altitude of 1035 metres, Chamonix is one of France's largest municipalities, covering more than 115 km². The valley is home to about 15,000 permanent residents who need to be mobile, to heat their homes and to go about their business on a daily basis...

As one of the most visited natural sites in the world, largely due to the notoriety of Mont Blanc, western Europe's highest summit, the Valley attracts millions of tourists, climbers and mountaineers every year.

The Chamonix Valley is also located at one extremity of the Mont-Blanc tunnel (which celebrated its 50th anniversary in 2015) on a strategic European axis. Some 2 million vehicles drive through the tunnel every year.

All these factors contribute to making the Chamonix Valley a unique place, a real "in situ" laboratory for climate change, where specific measures need to be taken.

MEASURES TO COMBAT GREENHOUSE GASES AND ATMOSPHERIC POLLUTANTS

The Territorial Energy Climate Plan (since 2012): a global strategy for the Valley.

The reality of climate change, *"is happening before our eyes every day"*, regrets the mayor of Chamonix, *Éric Fournier*. A Territorial Energy Climate Plan (PCET) was adopted in 2012, the first of its kind for a mountain territory. Its objective being to reduce energy consumption and greenhouse gas emissions to mitigate the effects of climate change and to increase the proportion of renewable energy.

An Energy Transition Plan with concrete measures (since 2015).

Faced with a relative deterioration in air quality essentially caused by road traffic, including the daily passage of thousands of lorries and cars, as well as domestic heating, the Chamonix Mont-Blanc Valley has been striving to improve the quality of its air through a series of measures taken over the past few years.

The local authorities' objectives are ambitious. *"We have no choice; public health is at stake and we need to act as pioneers to improve the situation"*.

A specific plan for the energy transition was adopted by the Valley in February 2015. It concerns transport, energy and housing. Most of its actions are detailed in this press release.

Considered a territory of excellence for energy and ecological transition, the Chamonix valley has been awarded the TEPOS and TEPCV labels.

In acknowledgement of the actions undertaken in the region, the Chamonix valley is considered both a Positive Energy Territory (TEPOS) and a Positive Energy Territory for Green Growth (TEPCV). As *Éric Fournier* explains, *"these two labels are the recognition of several years of commitment by the area to adapt its activities, making them more energy efficient whilst reducing pollution factors"*.

They also enable us to benefit from significant funding from the Auvergne-Rhône-Alpes region (TEPOS) and the State (TEPCV).

An Urban Travel Plan (PDU) was adopted in 2008 at the initiative of the Community of Communes of the Chamonix Valley to establish a coherent framework for multimodal travel and soft mobility.

A High Mountain Climate Plan since 2018, to adapt access to the mountains and high mountains in the face of climate change: adapting tourist infrastructures, modifying access to mountain huts, adjusting the operating periods of mountain lifts, insisting on risk prevention and training for practitioners... The Espace Mont-Blanc is conducting a project entitled AdaPT Mont-Blanc which is developing tools for territorial planning and management.

Publication of an environmental Good Practice Handbook (in French and English - 2018) for the general public: "Did you know" sections, communal actions presented theme by theme, recommended daily eco-practices.



TIMELINE OF COMMITMENTS TO SUSTAINABILITY

Well before the creation of the community of communes (2010), the Chamonix Mont-Blanc Valley pursued a bold environmental and energy policy.

1998

- First cross-border campaign of local air pollution measurements, conducted jointly by l'Air des deux Savoie, Resival du Canton du Valais (CH), and l'Arpa - Aosta Valley (IT). Operation conducted within the framework of the Mont-Blanc Transborder Conference, a cooperative structure between France, Italy and Switzerland since 1992.
- Free transport on the urban bus network was introduced in winter.

2005

- Free circulation on the whole of the public transport network - trains and urban buses.

2009

- Voluntary commitment to the Territorial Climate and Energy Plan (PCET). Adoption of the first Climate Plan for a French mountain territory in June 2012.

2010

- Signing of the Mayors' Convention, laying down energy consumption and greenhouse gas reduction targets.

2012

- Adherence to the Arve Valley Atmospheric Protection Plan (PPA).
 - Introduction of "Climate Clubs".
- Aim: to provide concrete tools for professionals and event organisers in order to meet the objectives of the Territorial Climate Energy Plan.

2013

- "Green Snowflake" label, mountain equivalent of the Blue Flag, awarded in 2015, and renewed in 2018.
- Implementation of the Air Wood Fund scheme throughout the Arve Valley.

2015

- Chamonix-Mont-Blanc, elected "Alpine Town of the Year".
- The Valley commits to a TEPOS.
- Air quality plan (specific to the Valley).
- Introduction of the Energy Housing Fund, a financial support scheme specific to the Valley to encourage energy efficient improvements and renovation works on private housing.

- Implementation of the "Better Living" programme for energy renovation (modest households).
- Creation of the "intercommunal advisory committee" dedicated to environmental issues and air quality (elected representatives of the Valley, representatives of associations and socio-professionals, Tourist Office, retailers, Hotel Trade Association, Compagnie du Mont-Blanc, Compagnie des Guides).
- Introduction of the first energy land registry service with the Espace Mont-Blanc - to determine the renewable energy potential of a land plot: planETer.

2016

- Acquisition of electric and hybrid buses.
- Creation and implementation of a free accompaniment programme for energy efficient improvement projects and "energy renovation" consultations.
- Introduction of the Energy Housing Fund +, increased grants.
- Launch of an epidemiological study on air pollution.

2017

- Launching of the renovalleechamonix.fr website dedicated to energy renovation in the Valley.
- Creation of the Air Gas Fund with GrDF.
- Financial support for the Air Wood Fund increased from €1,000 to €2,000.
- Train frequency doubles on the Mont-Blanc Express railway line during peak hours throughout the summer season (train every half-hour).

2018

- Strong involvement in the finalization of the Atmosphere Protection Plan II.
- Partnership for €1,000 additional support from CD74 for the FEH+ scheme (middle-income households).
- Publication of a "good practice handbook".
- Creation of an "Air and Energy Ambassador" position.
- Installation of collective compost bins.

2019

- Development of the Air Business Fund (FAE).
- Regional bonus for the Energy Housing Fund (FEH) and Energy Housing Fund + (FEH+).
- Development of the Air Gas Fund for condominiums (FAG Copro).
- Implementation of a financial support scheme for the energy audit of condominiums.



ENERGY
RENOVATION

THE CHAMONIX MONT-BLANC VALLEY COORDINATES ITS ENERGY TRANSITION

The Chamonix Valley encourages and supports energy efficient renovations: a beneficial stand for home comfort, for local craftsmen and businesses, for domestic expenses and for local heritage.

For several years now, the housing sector has been identified (alongside the transport sector) as the main potential source of energy savings for a reduced impact of our activities

on public health and the environment. This is what motivated the community to promote a specific approach in line with our Territorial Energy Climate Plan and the Plans for the Protection of the Atmosphere (1st: 2012-2018, 2nd: 2019-2023): encourage the Valley's permanent residents (individual housing and co-ownership properties) to undertake energy renovation works thanks to a series of intelligible, relevant and effective grants.

Eight different funds are available:

- The "Energy Housing Fund" since 2015 (specific to the Valley).
- The "Energy Housing Fund +" since 2016 (specific to the Valley).
- The "Air Wood Fund", since 2013.
- The "Better Living" programme since 2015.
- The "Air Gas Fund" since 2017 (specific to the Valley).
- The "Condominium Air Gas Fund" since 2019.
- Support for the energy audit of condominiums since 2019.
- The "Air Business Fund" since 2019.

An energy renovation website has been online since 2016 to offer personal support for private individuals: renovalleechamonix.fr.

Technical datasheets, eco-gestures, detailed list of grants... this dedicated website provides access to a variety of documents and information regarding potential home improvement works to facilitate renovation projects.

• Information meetings with advisors to provide help and support for individuals.

"Energy renovation information" drop-in sessions, financed by the Community of Communes, are run by the Innovales and Soliha associations (every 1st and 3rd Wednesday of the month). Advisors are available to help individuals define the nature

and schedule of prospective works. House visits may equally be arranged to best assess individual needs and priorities. Advisors also provide homeowners with an overview of available funds and help them determine their financing plan.

The "energy renovation information" sessions financed by the Community of Communes of the Chamonix Valley and run by "Innovales" are open to all permanent residents (for whom the financial support provided by the Valley is exclusively allocated) and secondary residents. The "Soliha" association's drop-in sessions are only open to the beneficiaries of the "Better Living" programme. The Community of Communes of the Chamonix Mont-Blanc Valley works in partnership with ADEME and the Auvergne-Rhône-Alpes Region.

• An Air and Energy Ambassador

The Air and Energy Ambassador's role is to meet with the residents to inform and raise awareness in relation to air quality issues. An important part of the ambassador's mission is to encourage homeowners to improve the energy efficiency of their property by switching to more efficient and environmentally friendly heating methods.

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ENERGY RENOVATION FOR PRIVATE HOUSING

The "Air Wood Fund" since 2013.

394 projects funded by 15/07/2019 in the Chamonix valley.

The Air Wood Fund is a grant to encourage the purchase of high-performance wood-burning appliances. Its objective is to reduce emissions of pollutants which affect air quality.

It is intended for primary residents.

The grant is a flat-rate amount of €2,000, capped at 50% of the purchase price, non means-tested.

The scheme is supported by the SM3A and implemented in conjunction with the ADEME, Regional Council, Departmental Council and the 5 Communities of Communes of the Arve Valley.

The "Energy Housing Fund" since 2015 (specific to the Valley). **182 projects funded for a total value of €197,314** date of 02/07/2019.

The Energy Housing Fund is a grant for 20% of the amount of the works, capped at €1,500, to support the energy efficiency improvement of housing. Non means-tested, it is intended for owners, tenants or non-paying occupants of a primary residence in the Valley. Renovation works must be carried out by RGE certified craftsmen ("recognised as guarantor of the environment").

The "Energy Housing Fund +" since 2016 (specific to the Valley). **19 projects funded for a total value of €46,773** date of 02/07/2019.

A scheme intended for primary residents wishing to undertake works of two or more different types at the same time. It gives access to a grant equalling 20% of the total amount of the works, with a maximum of €3,000.

The "Better Living" programme, since 2015. **39 projects funded for a total value of €59,121** date of 02/07/2019.

Created by the National Housing Improvement Agency (ANAH) to help protect against energy insecurity, the "Better Living" programme is aimed at homeowners or landlords with modest or very modest incomes wishing to

carry out energy renovation works.

The financial support offered by the

Community of Communes amounts to 20% of the cost of the works, capped at €3,000.

In addition, the Haute-Savoie Departmental Council grants funding varying from €2,000 to €3,000 depending on income. 20% of the households in the Valley are eligible for these grants!

The "Air Gas Fund" since 2017.

55 projects funded by 04/07/2019.

Whether your home is already connected to the gas network or not, whether you are a permanent or secondary resident, GrDF and the Community of Communes of the Chamonix Valley offer financial incentives to support the installation of a gas heating system in place of your old fuel or wood burning appliance (fireplace, stove, condensing boiler).

Funding ranges from €1,000 to €2,400 depending on the case. The aim of these exceptional grants is to reduce particle and pollutant emissions thanks to the use of natural gas.

The "Condominium Air Gas Fund" since 2019.

Implemented by the Chamonix Valley, this new scheme aims to promote energy renovation projects on condominiums and their conversion to gas heating systems, with a grant of 200 + 200 = €400 per property, paid in equal shares by the Community of Communes of the Chamonix Valley and GrDF. An agreement has been signed to this effect with GrDF.

Support for the energy audit of condominiums since 2019.

Financial support for the energy audit of condominiums is available - 80% of the cost of the audit - to encourage owners to undertake the necessary works.

SUPPORT FOR PROFESSIONALS

The "Air Business Fund".

The Air Business Fund (FAE) was set up as part of the Arve Valley Atmospheric Protection Plan. It is financed by the Auvergne-Rhône-Alpes Region, the Haute-Savoie Department and the Community of Communes of the Chamonix Mont-Blanc Valley.

This fund's objective is to reduce air pollutant emissions on the part of professionals who can obtain funding in exchange for virtuous investments. It is aimed at wood craftsmen, construction companies, gravel pits and quarries, the hotel and catering sector; any business identified as emitting air pollutants.

Funding concerns:

- heating appliance changes,

- thermal insulation in the case of a heating appliance change,
- particle filtration by systems suited to combustion appliances,
- energy change (preference given to renewable energies),
- dust sprinkler system,
- non-road machinery: an excavator with an energy recovery system for example,
- particle filter systems,
- small electrical construction equipment: electric angle grinder, electric compressor, electric or hybrid solar mower,
- any device that reduces direct or indirect particle emissions.

The overall budget amounts to €750,000 over a period of 5 years.

THE ENERGY RENOVATION OF PUBLIC BUILDINGS

The Community of Communes is in the process of renovating its public buildings (over €1 million per year) to reduce energy consumption by 38% by 2020.

The following buildings have already been renovated: the Chamonix media library; the Richard Bozon sports centre (gymnasium windows); the Chamonix ice rink (electrical installation); the Pèlerins and Argentière schools; Les Houches town hall and healthcare centre; the school, town hall and J. Morel room in Servoz.



Media library



Sports centre



Pèlerins school



MOBILITY

ECO-MOBILITY IN THE VALLEY

Electric shuttles, hybrid buses, renovation of the railway line, cycle tracks, pedestrian walkways: structured eco-mobility solutions are being increasingly developed in the Chamonix Valley.

Since 2005, the year-round implementation of free circulation aboard local buses and trains currently allows for the transport of over 3 million passengers every year in a very busy valley. The network must answer the needs of the Valley's local inhabitants, seasonal workers and tourists. Close to €5 million in an annual

subsidy is allocated to the urban bus network. Since 2012, over €100 million have been committed for the modernisation of the local railway line.

Over 11 km of cycle tracks are being developed between Chamonix and Les Houches (2016 to 2020).

Electric mobility is promoted and facilitated. The construction of a large P + R car park at Le Grépon, just outside Chamonix, is under study to relieve congestion in the town centre and the Valley.

VIRTUOUS BUSES

The entire fleet is in full compliance with the requirements of the European Atmospheric Protection Plan (PPA) implemented by the Valley.

High-capacity buses with hybrid engines travel routes linking the four municipalities of the Valley. The choice of hybrid buses is justified by the need for sufficiently powerful vehicles given the steep gradient of the route, something which only diesel buses used to be able to provide. Hybrid buses are silent and allow for smooth driving, a 30% reduction in fuel consumption and significantly lower CO2 emissions (26 tonnes fewer CO2 emissions per bus per year).

100% electric shuttles - the famous "mulets" ("mules") in reference to Chamonix's history - travel through the centre of Chamonix and can be ridden free of charge by both holidaymakers and local inhabitants.

Passengers can make the most of the sights aboard these 20-seater, low-floor electric minibuses. Designed in France, these 21st century "mules" are equipped with recyclable batteries fixed on the roof which recover energy during deceleration. The Valley has chosen non-polluting, energy-efficient options with a good CO2 balance in both manufacturing and usage.

Coming soon: natural gas buses; the results (load, engine...) of the natural gas bus tests conducted with three manufacturers during peak periods over the course of winter 2018/2019 are very encouraging. The first 4 natural gas buses will join the Chamonix bus fleet in winter 2019/2020. The conversion of half of the fleet (around fifteen buses) is planned as soon as the future public service delegation contract is operational - summer 2022, after consultation.



Hybrid buses



100% electric "Mulets"

MONT-BLANC EXPRESS: THE CHAMONIX VALLEY TRAIN IS EVOLVING INTO A SHUTTLE TRAIN

The renewal of a century-old line, part of the Chamonix Valley's legacy.

Very popular with tourists visiting the Valley in both summer and winter, as well as with the locals, this legendary line was built in 1908 and is unique in France. Linked to the Swiss railway network, its metric gauge tracks are one of its particularities.

The "Mont-Blanc Express" can be travelled free of charge by Valley inhabitants and holidaymakers. Locals, seasonal workers, second-home owners, schoolchildren and guests residing in the Valley all have access to a personal card which guarantees free travel aboard the buses and trains throughout the whole of the Chamonix Mont-Blanc Valley, from Servoz to Vallorcine.

For over fifteen years now, the local authorities have favoured public transport as an alternative to cars for both tourists and local residents. The "Mont-Blanc Express" is a fine example of a small mountain railway line built for touristic purposes, being converted into a sustainable means of transport for an entire valley, thus reducing the impact of air pollution and greenhouse gas emissions.

The first phase of modernisation works on our railway line took place between 2012 and 2015 and involved the renewal of around 15 km

of tracks and the renovation of the Montets tunnel. The second phase was launched thanks to the intervention of the regional authorities, who exceptionally agreed to pre-finance all the works planned to consolidate the rail link, for a total amount of €23 million: this mainly involved renovating an additional 8 km of tracks and replacing several engineering structures, including 3 railway bridges. Works began in 2019 and will be completed in 2020.

The renovation of the Chamonix Valley railway network should go hand in hand with an acceleration of the modernisation project on the Annemasse - Saint-Gervais line, including the switch to automatic signalling. Pre-project studies should be finished by the end of 2020/2021 with a view to completing the works by the end of the Atmospheric Protection Plan II in 2023. The aim is to make the train an efficient and attractive means of transport, operating at a guaranteed frequency of two trains per hour in both directions, thus becoming a desirable solution for the thousands of commuters based between the Arve Valley and Geneva area.



The Mont-Blanc Express in the Vallorcine train station



The Mont-Blanc Express

WORK CONTINUES ON THE GREEN LANE CYCLE ROUTE!

A bicycle lane is being created between Chamonix and Les Houches to encourage valley residents and tourists to give up driving in favour of cycling. An uninterrupted route ensures a smooth and safe traffic flow. Between 2016 and 2020, over 11 km of this lane are being built between Chamonix and Les Houches for a total amount of around €6 million.

After the installation of two footbridges for pedestrians and cyclists over the Arve river (by the Piralotaz and Gaillands bridges), work continues on the cycle lane along the Promenade Marie Paradis and Route du Bouchet. In addition, bicycle racks - close to 500 parking spots - are progressively being fitted throughout the Valley.



Bicycle lane in Les Bossons

ON THE ROAD TOWARDS ELECTRIC MOBILITY

Charging stations for electric vehicles.

Four double electric charging stations have been installed in the heart of Chamonix, in partnership with SYANE (Energy and digital development syndicate for Haute-Savoie). The charging points are located behind the town hall and in the Allobroges, Corzolet and Courmayeur car parks.

Special rates for electric vehicles + free charging in allocated spaces.

Electric vehicle owners benefit from special rates in our covered car parks: 50% off the normal subscription / "car" parking rate. Charging is free in the allocated spaces. Several connections have been set up in three car parks: St-Michel, 3 sockets; Mont-Blanc, 2 sockets; Entrèves, 2 sockets.

External sockets for electric cars.

There are two sockets in the closed car park by the tennis courts. Charging is free on the reserved spaces.

Electric vehicles in the communal fleet.

Thanks to its partnership with BMW, the intermunicipal fleet has acquired 10 electric vehicles at zero cost. The community has also acquired three other 100% electric vehicles and replaced two old trucks with newer ones which meet the Euro 6 standard (the most advanced standard in terms of environmental protection). All of these vehicles are used by councillors and municipal services as part of their missions.



ENERGY

A FOCUS ON RENEWABLE ENERGIES: GEOTHERMAL ENERGY, SOLAR COLLECTORS...

Choosing renewable energies for energy production in our public or private buildings.

Thanks to our PlanETer energy planning tool, the energy potential of each public building is systematically studied, both when considering the building of new infrastructures and for rehabilitation projects. PlanETer can also be used by private individuals to help them make the best possible energy choices.

10,000 buildings in the Chamonix Mont-Blanc

Valley have been mapped.

PlanETer (Territorial Energy Planning for the Espace Mont-Blanc) is a new online tool which allows the inhabitants and professionals of the Chamonix Mont-Blanc Valley (as well as several municipalities in the Swiss Valais, including Martigny) to choose the renewable energy form best suited to the situation and exposure of their house or building.

Geothermal energy for the “Les Petites Cordées” crèche and housing for the elderly.

For the “Les Petites Cordées” crèche in Chamonix, geothermal energy was favoured. A 100kw heat pump produces the necessary energy for heating and domestic hot water for the entire structure, which also includes housing.

Thermal solar collectors at the EHPAD (residential facility for dependent elderly people).

At the EHPAD in Chamonix, thermal solar collectors ensure the production of domestic hot water whilst a gas boiler supplies the heating. This same boiler also provides heating for the nearby Music School.

Photovoltaic panels above the tennis courts.

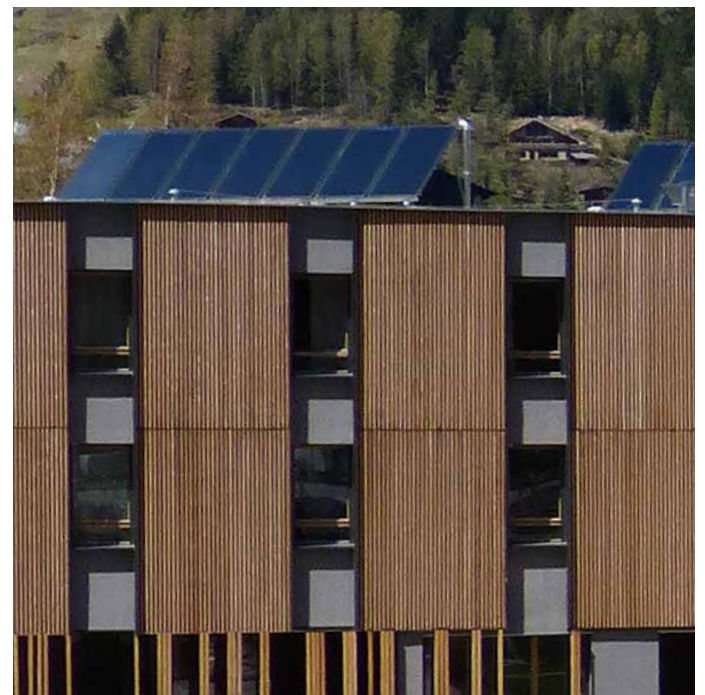
600 m² of photovoltaic panels have been installed above the covered tennis courts to produce electricity that will be fed back into the power grid.

Saving energy.

The swimming pool’s technical equipment has been renewed. The aim is to ensure a significant reduction of energy needs (to heat the water) by promoting heat energy recovery, as well as a reduction of water needs (by optimizing its renewal).



“Les Petites Cordées” crèche



EHPAD Hélène Couttet nursing home

MAKING THE MOST OF THE VALLEY'S HYDROELECTRIC POTENTIAL!

Electricity: 100% renewable energy to respond to the community's needs.

The Chamonix Town Hall and the Community of Communes of the Chamonix Valley are members of the SYANE, the Haute-Savoie energy union. The SYANE manages a joint buying organisation for the energy supply of its members. ENALP, the selected energy supplier, brings together the electricity boards of Les Houches, Sallanches and Bonneville, as well as the Compagnie Nationale du Rhône (CNR). It guarantees communities 100% renewable energy (essentially from hydropower and, to a lesser extent, wind power). Green energy thus provides the power for all of our public requirements: the lighting of public buildings, the operation of the Sports Centre's pumps and cooling units, the running of our computer servers, artificial snow production, the powering of the Bossons chairlift, central kitchens' appliances, charging stations for electric vehicles...

Securing the electricity networks: placing underground sections of the 63,000V high voltage power lines between Chamonix and Les Houches.

By burying its 63,000V power lines, the Valley's main objective is to secure the network in order to ensure a continued supply in electricity in the face of climatic hazards. The winter of 2017/2018 demonstrated that the avalanche risk could pose a threat to the power lines. This vast project extends over 9 km between Chamonix and Les Houches and totals a cost of nearly €10 million. The commissioning of underground sections should take place by the end of 2019 and overhead structures are to be removed in 2020.

Free distribution of 2000 LED lamps to the local population.

Holder of the TEPCV (positive energy territory for the promotion of green growth) label, the Community of Communes, in association with EDF and the Ministry of Ecology, led a campaign at the end of 2017,

which entailed the distribution of 1000 sets of 2 LED lightbulbs to the inhabitants of the four municipalities of the Valley. Low-income households were favoured. The use of LED lamps allows for 80% energy savings compared to the use of traditional incandescent bulbs. These bulbs have a service life of at least 15,000 hours.

Construction of hydroelectric power plants.

No less than 3 hydroelectric installations are to see the light of day in the Valley by 2020/2021:

- On the Taconnaz torrent, production of 12.5 GWh/year: annual electricity consumption (excluding heating) of over 4,000 households.
- On the Favrandts torrent, production of 3.2 GWh/year: annual electricity consumption (excluding heating) of around 1,000 households.
- On the Bourgeat torrent, production of 3 GWh/year: annual electricity consumption (excluding heating) of around 1,000 households.

These projects are a clear illustration of the community's strong commitment to energy transition and self-sufficiency. These installations will complement the existing hydroelectric power plants in the area, notably in Les Bois (subglacial water abstraction), and in Émosson on the Swiss border. In the long term, these 3 installations will cover almost all of the Valley's household electricity needs, excluding heating.



Future hydroelectric power plant in Taconnaz

NATURAL GAS, BIOGAS... AND HYDROGEN

Heating our public buildings using gas.

148 out of the 150 public buildings owned by the municipality and Community of Communes (town hall, sports centre, central kitchens, etc.) are heated by gas boilers. Gas boilers are much more efficient than oil boilers in terms of heat production and, most importantly, far less polluting, as gas emits virtually no particles.

Natural gas rather than fuel oil.

An agreement has been signed between Chamonix and GrDF to ensure a better connection to the gas network for private individuals. GrDF and the Community of Communes of the Chamonix Valley offer financial incentives to support the installation of gas heating systems in place of old fuel or wood burning appliances (fireplace, stove, condensing boiler).

Funding ranges from €1,000 to €2,400 depending on the cases. The scheme has been extended to condominiums in 2019 (from €200 to €400 grants per lot). The aim of these exceptional grants is to reduce particle and pollutant emissions thanks to the use of natural gas. Natural gas is the fuel which emits the least greenhouse gases. It also presents the significant advantage of emitting virtually no particles, a recognized asset in the fight for air quality.

A methanisation plant to turn waste into energy.

The building of a methanisation plant near the Trabets wastewater treatment plant in Les Houches is currently under study. It would process the sludge from the sewage

treatment plant, which is currently burned, oils from public and private establishments and, ultimately, organic household waste, the law requiring the separate treatment of bio-waste from 2025 onwards. The plant would produce biogas which would be fed back into the grid after filtering and purification.

The creation of a multi-fuel green station in the Chamonix valley.

The creation of a multi-fuel green station is under study in collaboration with the Auvergne-Rhône-Alpes Region. It would offer:

- NGV / biomethane (in connection with the methanisation plant project developed by the Community of Communes).
- Fast electric charging points.
- Hydrogen (for electric vehicles equipped with hydrogen fuel cells).

Local professionals have been contacted to help provide an idea of the number of future users and assess the potential for renewal of part of their vehicle fleets. Several partners have expressed interest in participating in the project.

Encouraging the creation of village power stations.

Promoting self-sufficiency thanks to citizens' projects, particularly in the fields of photovoltaics and geothermal energy.



Gas fireplace



4

BIODIVERSITY

PRESERVING THE ENVIRONMENT

Whether subject to regulations or not, natural areas are part of our heritage and must be protected at all costs, especially in the mountains. Long aware of the exceptional yet fragile nature of their surroundings, the municipalities of the Chamonix Valley have taken numerous actions in favour of the environment over time. Today however, alongside its partners, the Community of Communes goes further, seeking to reconcile environmental protection, human activity and public awareness through a series of actions for the management and promotion of its natural areas.

The preservation of our exceptional natural resources is a priority for the local authorities who have been working to reconcile environmental protection, human activity and awareness raising for many years.

Our territory is working to develop scientific knowledge, and grasp the impact of climate change, in order to adapt our policies and behaviour.

- Loriaz, Le Péclerey and Le Plan de l'Aiguille for example, are research sites for the CREA (Research Centre on High Altitude Ecosystems), an organization which closely monitors the evolution of the vegetation.
- The communal forest of Les Houches hosts a permanent forest observatory: The National Forestry Office has put in place some 280 monitoring plots on wood production and forest biodiversity.

The community seeks to raise awareness among the public, because better knowledge and understanding of the exceptional environment that surrounds us allows for better protection.

- Every summer, the chalet du Col des Montets welcomes close to 50,000 visitors for its exhibitions and activities dedicated to the fauna and flora of our mountains.
- Throughout the valley, educational trails, such as the one in Les Chavants, and observation sites, offer the possibility to learn a lot about our natural heritage in a recreational manner.

90% of the area's land surface is under some level of protection, including 3 nature reserves in the Aiguilles Rouges Massif and 2 listed sites in the Mont-Blanc Massif area. Several other sites are protected or part of the Natura 2000 European network of natural areas designated for the rarity or fragility of animal or plant species and habitats that they host. Sensitive natural areas - recognized for their remarkable biodiversity - have also been identified. Finally, two other natural environments are concerned: mountain pastures and forests, which represent a third of the territory and whose lesser known but crucial role is to protect the Valley against natural hazards.

- "Nature guides" work with the schoolchildren in the valley and offer workshops during the holidays ("field games", "tiny animals"... at the House of the Lieutenant in Servoz).

Finally, communal services also play their part in preserving the biodiversity: no plant protection products used for roadside maintenance, flowered roundabouts, manual trail maintenance, reflection on public lighting...

Chamonix has applied to UNESCO for the classification of the Mont-Blanc Massif as a World Heritage site.

In January 2017, the members of the Chamonix municipal council unanimously decided to launch the Mont-Blanc Massif nomination process for UNESCO World Heritage. This enterprise has a clear purpose: to protect and preserve both natural heritage and local inhabitants! In pursuing the process, the Mont-Blanc Cross-border conference (France, Italy, Switzerland) chose to insist on the "Cultural landmark" quality of the Mont-Blanc Massif so that the nomination could be based on the special relationship established between man, the mountains and the high mountains over the centuries. Experts have been commissioned to work on the definition of the Exceptional Universal Value (E.U.V.), necessary for the submission of the nomination dossier to the Tentative Lists of the three countries concerned.



WASTE

WASTE - ECO-CONSUMPTION

Discard less and throw away more intelligently!

In view of the fact that waste treatment generates greenhouse gas and pollutant emissions, energy consumption and road transport, the local authorities' objective is to reduce overall waste generation in the Valley.

The Community of Communes of the Chamonix Mont-Blanc Valley has launched a **waste reduction and recycling plan which aims to reduce incinerable waste (including**

The Community of Communes of the Chamonix Valley and several of its partners (SITOM, CITEO, local associations...) provide everyone the means to generate less waste:

- 171 voluntary disposal points, and 600 waste containers can be found throughout the Valley. The installation of semi-buried containers is ongoing.
- 2 waste collection sites open 6 days a week in Chamonix (Le Closy) and in Les Houches (Bocher). For the disposal of wood and pallets, metal, cardboard boxes, bulky items, incinerable waste, tires, green waste, electrical and electronic waste, textiles, oils, batteries... The Bocher waste collection centre is accessible to professionals for the disposal of bulky items, metal, wood, green waste, subject to volume restrictions, prior registration and a tipping fee per tonne. The green waste produced in Bocher is turned into compost. It is compliant with agronomic standards and is given away to

household waste) by 50% and recycle 65% of all waste by 2025.

Three key measures to achieve these objectives:

- Widespread use of compost,
- Collection of bio-waste from collective and professional structures,
- Incentive-based rates (under study).

The specificity of the area as a tourist destination implies participation from everyone: professionals, local inhabitants, short and long-term visitors!

private individuals, but also to an organic farmer in Vallorcine, to landscape gardeners, construction workers, the Compagnie du Mont-Blanc to re-vegetate certain areas...

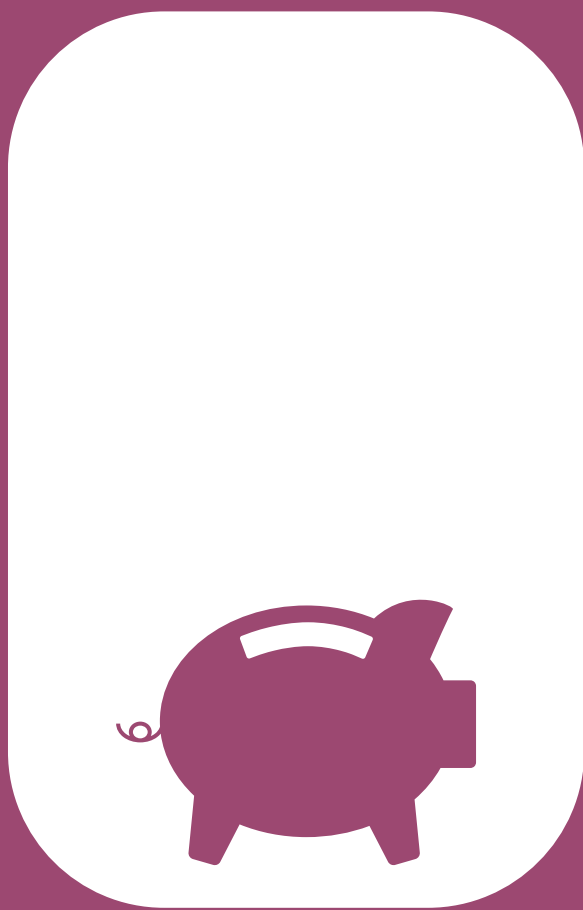
- 23 collective compost bins throughout the Valley (in areas like Les Pèlerins or Les Bossons, at the foot of apartment buildings...).
- Individual compost bins and bio-buckets sold to private individuals for only €15.
- A donation and free collection point at the Bocher waste disposal centre.
- 7 textile containers.
- Several local associations to help with the collection, redistribution and recycling of goods.
- "Gourmet bags" in partner restaurants to reduce food waste.
- The CITEO "Sorting Guide" app which indicates the geolocation of the area's different waste collection points and tells you everything you need to know for the proper sorting of your rubbish.



"Moloks" in the centre of Chamonix



"Sorting Guide" application



6

BUDGET

THE COST OF ENVIRONMENTAL PROTECTION

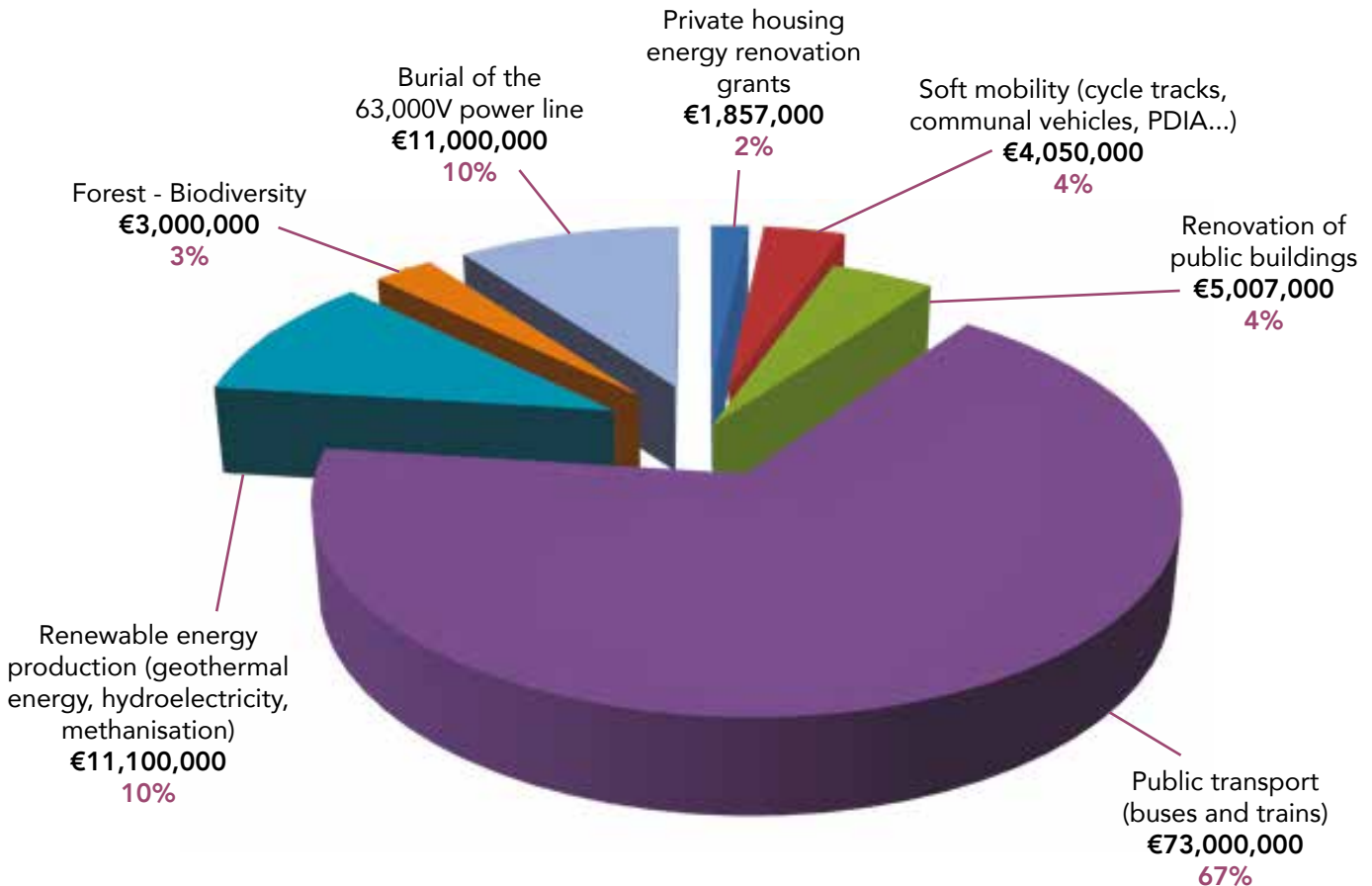
Every year in the Chamonix Valley, over 35 million euros go towards reducing the impact of air pollution and global warming and protecting the environment.

This graphic provides a clear overview of the sums mobilised by the Valley and its partners to operate its own energy transition on a local scale. The different budgets involved, operating and investment, add up to the considerable amount of 110 million euros committed over the years 2017-2019; we see that the main cost is that of public transport, which includes both the operation of the local

rail network and urban bus network, as well as the necessary infrastructure works.

Public transport plays a key role in the system implemented by the local authorities over the past few years and is to be further developed in order to offer both residents and tourists a genuine and complete alternative to using the car. By increasing the frequency of trains, the number of passengers has already doubled between 2010 and 2014. It has risen further since the summer of 2017 thanks to trains running every half-hour during peak times.

The Valley's three-year commitment in favour of an energy transition 2017-2019: €109 million



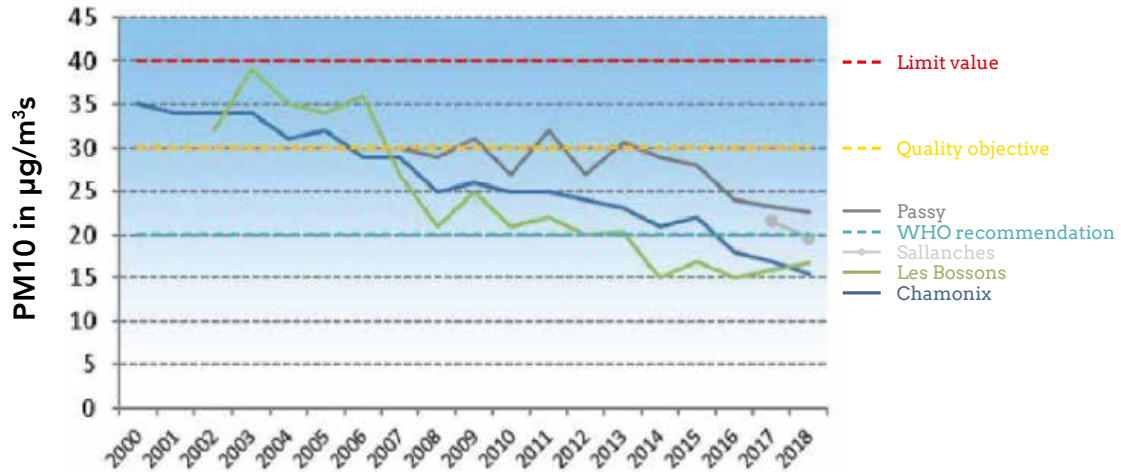


EFFECTS OF
EXECUTED
MEASURES

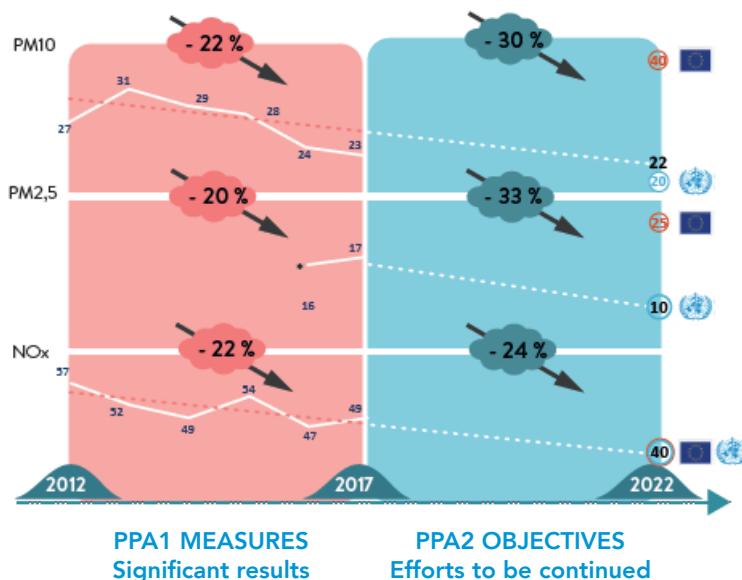
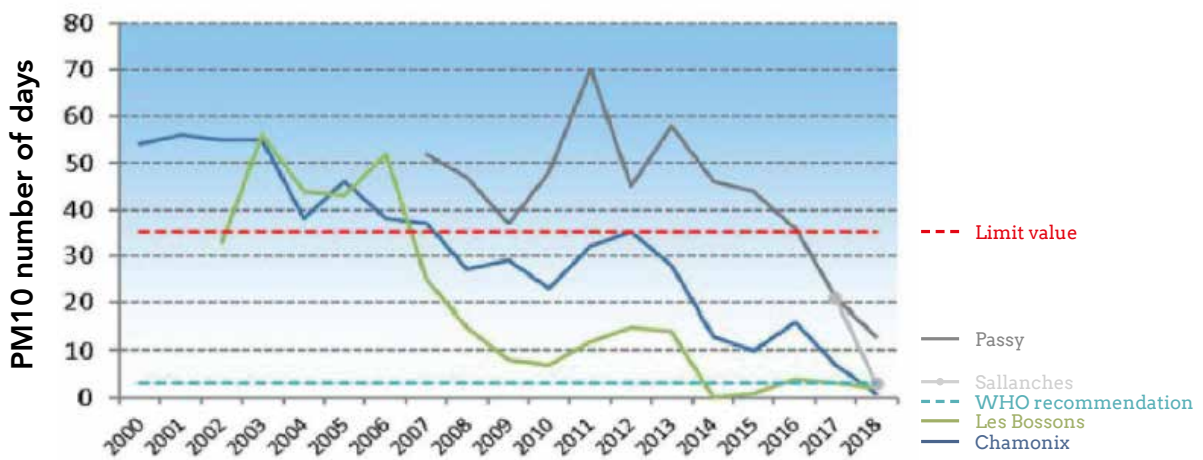
FIRST EFFECTS ON AIR QUALITY

Data shows that in terms of PM10 pollution, Chamonix now finds itself below the WHO standards threshold. This encouraging result must be considered in the light of the intense efforts pursued in favour of an energy transition.

PM10: Evolution of annual averages



PM10: Evolution of the number of days exceeding 50µg/m³



The Chamonix Valley is committed to the implementation of 30 concrete actions for the Ecological and Energy Transition. These concern multiple sectors: mobility, housing and construction, energy, waste, circular economy... For Bernard Ollier, municipal councillor in charge of the environment, "these are 30 actions in which the elected

officials, services and partners are particularly involved. Practical achievements, large-scale investments, support and advice, financial grants...". These actions are listed in a chart which will be regularly updated in line with the progress of the many projects in which the community is involved.

30 actions for the environment & the Valley

CHAMONIX-MONT-BLANC THE POSITIVE ENERGY VALLEY

june 2019



ACTIONS	CONTENTS & OBJECTIVES	TIMELINE	FINANCING for information purposes
MOBILITY			
1 Free public transport	Free circulation aboard the trains and buses to reduce car traffic	Since 1997 for buses/ 2005 for trains	CC & CMB: €6 M/year
2 Development of rail travel	Modernisation works: gradual extension of the service to a half-hourly frequency year-round	Summer extension since 2017 Extension pursuit 2020/2021	With the Region, study in progress regarding the future management method
3 Development and conversion of the bus fleet	50% (15 buses) converted to NGV	4 buses from winter 2020	Amendment or future DSP contract
4 Cycling and soft/active mobility plan in the Valley	Gradual extension of cycle lanes to the entire valley	2016/2019 Chamonix-downvalley 6km+ 2km upvalley / 2020 Les Praz+Rie-lacs 4km	Municipalities + partners: €6 M 2016/2019 + €2 M in 2020
5 Continued pedestrianisation	2.5km of pedestrian lanes: handing the town centre back to pedestrians	2020 Rue du Lyret pedestrianisation	Rue du Lyret: €0.6 M
6 Clean vehicle plan	Conversion of the communal fleet (BMW partnership) Installation of charging stations for electric vehicles Financial support for acquisition of clean vehicles by businesses & communities	Since 2016 2016/2017: 20 public charging points Autumn 2019 addition to regional support	CC + municipalities CC + SYANE CC: €1,000+Region: €3,000 to €8,000
7 All-road flow regulation	ZFE project (Low Emission Zones) Large-capacity Park and Ride lots in Le Grépon & Servoz	Feasibility study 2019/2020 2021/2022	ADEME + 5 CC Grépon project: €15 M
8 Green fuel service station	Reducing the ecological impact of transport	2019 study, 2020 construction	CC or private financing?
HOUSING AND CONSTRUCTION			
9 Replacement of polluting heating appliances	Pursual of the Air Wood Fund before the prohibition of open fireplaces	2013/2019: 400 grants allocated 2019/2022: + 300 grants	ADEME, Region, Department + CC €11 M funding in the Arve area
10 Diverse funding schemes for the energy renovation of private housing	FEH, FEH+, FAG and FAG COPROS, AUDIT COPROS ET BONUS RÉGIONAL, Better Living Programme	200 grants FEH, FEH+ 2015/2019 39 «Better Living» grants	CC + GRDF (FAG) or Region (FEH bonus) or Department (means-tested) + ANAH
11 Support for renovation projects	Local platform: information and advice, home diagnosis and dedicated website	Since 2016	CC + Region/ADEME + Department €60 000/year
12 Air Business Fund (FAC)	Insulation, heating, filters for professional premises, construction equipment... Eligible professionals: artisans, hotel owners...	Since spring 2019	CC + Region + Department €750 000 over 5 years

ENERGY**14 Developing hydroelectricity**

Construction of three power stations: Taconnaz (12 GWh/year), Favrand (3.2 GWh/year) & Bourgeat (3 GWh/year)

Taconnaz delivered by the end of 2019
Favrand & Bourgeat 2021

Taconnaz: € 8.5 M
Favrand: €2 M & Bourgeat: €3 M

15 Developing renewable energies

PlanEter energy land registry service

Since 2015

Cross-border Project

16 Village power stations

Promoting energy self-sufficiency thanks to citizens' projects: photovoltaics, geothermal energy...

Starting: autumn 2019

Citizens with public contributions to be defined on a case-by-case basis

17 Construction of a methanisation plant

Production of bio-gas in Les Trabets using bio-waste and sludge from the STEP. Phase 1: 60 Nm³/h; Phase 2: 80 Nm³/h

Delivery 2021

CC + Region + Department: €3 M

18 Development of the wood sector

Creation of a drying/storage facility in the Valley

2021

CC + Region + ADEME

19 Securing electricity networks

Burial of the 63 kV high-voltage power line (9 km)

2018/2019

€8 M: RTE + CC + Department

WASTE / CIRCULAR ECONOMY**20 Reducing waste production**

Reduction of incinerable waste by 50%
Recycling of 65%

2025
2025

CC - financed by the collection tax on household waste

21 Collecting bio-waste

Identification of waste sources, implementation of collection solutions, study on incentive pricing

Feasibility study: 2019

Future structuring of the sector

22 Widespread use of individual-collective compost

23 existing collective compost bins

2016/2019

CC + SITOM

23 Developing the redistribution & recycling of goods

Improving the rate of re-use and developing recycling facilities

Opening donation & free collection point: 2018

CC + Local associations

TOURISM**24 Developing ecotourism**

Raising awareness, involvement, development of offers promoting the cultural and natural heritage
Creation of accommodation / transport packages...

2020

CC + Tourist Office: Espace Valléen programme

25 Implementation of a voluntary carbon offset system

Integrating the ADEME carbon calculator and defining compensatory actions in the area

Autumn 2019

Tourist Office + CC

BIODIVERSITY**26 Protection of ecological corridors**

Identification, delimitation and protection, AlpBioNet project

2019/2020

Espace Alpin + ADEME + CC: €340 K

27 Protection of wildlife species and fight against invasive species

Protecting wildlife during the winter period
Enforced action to combat Japanese knotweed

2020/2023

C.T.E.N.S with the Department
Lab programme with ADEME

28 Maintaining the conditions for sustainable agriculture in the Valley

Providing for land reserves in the Local Urbanization Plans
Development of short supply circuits and eco-pastures

2020

Municipalities' Local Urbanisation Plans

ADAPTING TO CLIMATE CHANGE**29 High Mountain Climate Plan**

Concrete adaptation measures (ski lifts, access routes to the huts, works on the huts...) Valley perimeter

Multi-annual plan, from 2019

€ 32 M with partners

30 Adapt Mont-Blanc

Cross-border actions including the Observatory of Mont-Blanc

2017/2020

Espace Mont-Blanc: €1.3 M

**Community of Communes of the
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