

## Memorandum

### Subject

Under2 MOU Appendix

Noord-Brabant is a province in the south of the Netherlands and home to more than 2.5 million residents. The agrofood sector is a major contributor to the province's economy and there is also a strong innovation and technology sector. Cooperation between businesses is highly developed and that produces strong ecosystems. Energy consumption in Brabant is approximately 300 PJ and emissions of CO<sub>2</sub> amount to approximately 10 tons per resident.

### Targets

The Brabant Energy Agreement [*Brabants EnergieAkkoord*] (BEA) is an agreement between the most important social parties in Brabant, namely the business community, agriculture, residents, energy corporations, education, the environmental federation and the government. The BEA is intended to lead to a CO<sub>2</sub>-neutral Brabant in 2050. The BEA includes the national targets of 14% and 16% as interim targets for 2020 and 2023. In Brabant the parties involved are convinced that no-one can achieve the energy transition in isolation and that it has to be a joint effort. Thanks to the economic and social structure of Brabant (strong ecosystems) there are plenty of opportunities to take a lead in this respect. The provincial government believes its role is to create preconditions wherever necessary and possible to enable other parties to fulfil their role in the transition.

### The measures

The BEA and the Energy Agenda [*Energieagenda*] include measures to achieve our goals in the short term (between now and 2020). We are also focusing on improving the innovation climate, based on the conviction that we do not have the technology right now to achieve our goals in the longer term. That will require new and currently unavailable technologies. The provincial council has decided that it is going to update the Brabant Agenda during this administrative period. Energy measures will be dealt with which are not yet in the picture but which will contribute to follow-up steps in the sustainability process after 2020. We realise that major efforts are required both before and after 2020 in order to achieve the objectives, not only on the part of the provincial government but also society as a whole.

### Saving energy

#### *Industry*

The BEA contains the agreement that the industry will make an energy saving of 2% of per year. The industry is going to do this by rapidly introducing existing measures and by implementing innovative technology. Under the Environmental Management Act [*Wet milieubeheer*], companies have to implement all measures of which the costs can be recouped within five years. The parties are going to start looking for methods to increase the stimulating effect of this instrument when used.

#### *CHP*

Combined heat and power (CHP) was used widely in the past, partly thanks to our plentiful supplies of natural gas. It represents an extremely efficient use of primary energy which,

however, is under pressure due to the low price of electricity. Despite that, businesses are starting to look for opportunities to use this technology.

#### *Symbiosis*

Many industrial processes produce heat which the company in question cannot put to good use, but which still has added value for other businesses. A lot of energy can be saved by creating links between these companies. In cooperation with various partners, the provincial government is investigating possibilities of organising and implementing this process.

The same applies to some raw materials. One company's waste is another company's raw material.

#### *Zero Meter Reading Homes*

A consortium of companies is being developed in Brabant to focus on extreme home insulation to reduce energy consumption and create sustainable energy homes (Zero Meter Reading). The aim is to insulate 1,000 homes by 2020 and 800,000 homes by 2050.

### **Sustainable energy generation**

#### *Wind*

Throughout the Netherlands, the problem facing wind energy is to find suitable locations where there is space for wind turbines without causing disproportional nuisance to local residents. In cooperation with local authorities and other interested parties, the provincial government has designated certain areas as locations for the planned 420 MW of wind turbines by 2020.

#### *Geothermal energy*

Research has shown that geothermal energy can contribute considerably to the provision of sustainable energy at various locations. In a Green Deal five (semi-)public organisations have agreed to support geothermal energy in a way that enables the market to start using this technology. The target for 2020 is to realise approximately 50 MW of thermal energy.

#### *Sun*

As far as private individuals concerned, electricity from solar cells has now achieved grid-parity. As a result there has been a huge increase in the number of solar cells being installed. In connection with larger solar panel fields, the provincial government is drawing up policy to find suitable locations for these solar fields. In addition, the industry and agricultural sectors are being encouraged to generate solar power.

### **Organisational measures**

#### *Fund*

Although sufficient loan capital is often available in the market to finance energy projects, it is extremely difficult to obtain financing for equity capital. With a view to resolving this issue, the provincial government set up the Energy Fund [*Energiefonds*] which is intended primarily to help finance the equity capital required for energy projects. The aim is for this fund to contribute € 600 million of financing to projects during its 25 year term.

#### *4Os*

The parties in Brabant are investing heavily in cooperation between business, education, the government and the citizens involved and that involvement is also essential for the realisation of the energy transition.

#### *Cooperation between cities in Brabant*

The provisional government of Noord-Brabant is working closely with the five major cities in the province. This network is known as 'BrabantStad' and it uses the BrabantStad Work Agenda

[*Werkagenda BrabantStad*]. The Work Agenda contains a number of innovative and tested projects. BrabantStad focuses on the scaling up and roll-out of these innovations, which creates complementarity and connectivity between the cities and generates mass.

## **Innovation**

### *Solar*

A strong solar technology cluster has been developing since 2010. That cluster is focusing on the development of production technology for thin film solar cells. In the future those cells will be used more widely than the current crystalline cells.

### *Electrical driving*

Brabant is leading the way in the Netherlands when it comes to using and facilitating electrical driving. Indeed, the open standard for electrical charging, which is now being used in the Netherlands and elsewhere, was actually developed in Brabant.

### *Bio-based*

The combination of the process industry in Brabant and highly developed agrofood sector offers chances to increase the economic value of residual products. This in turn can reduce the use of (some) fossil fuels and lead to the inclusion of other raw materials in a circular economy (e.g. phosphorus). Other ways of generating energy, such as the sun and wind, are also being stimulated in the agrofood sector.