

Attn:  
The Municipal Executives  
The Provincial Executives  
The IPO (Association of Provincial Authorities)  
The VNG (Association of Netherlands Municipalities)  
EnergieNed (Netherlands Association of Energy Distribution Companies)  
The Electricity Grid Administrators

Recommendations with regard to overhead high-voltage power lines

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Copy to  
VROM Inspectie [VROM Inspectorate]  
GGD [Municipal Medical and Health Service]

### **A Sensible Approach to Risks**

In October 2004, the Dutch Lower House debated the memorandum entitled 'A Sensible Approach to Risks', which focuses on making decisions with an awareness for insecurities<sup>1</sup>. The essence of this addition to the existing risks policy is:

- the dangers and risks of an activity are weighed against the social advantages and disadvantages of that activity.
- the role of citizens in decision-making is intensified.
- the possible accumulation of risks is taken into account during the decision-making.
- the responsibility of the government, business community and citizens is made more explicit.
- the political decision-making process becomes more transparent.

### **Background information on the recommended policy**

One of the subjects used to illustrate this policy is the range of problems relating to living in the vicinity of overhead high-voltage power lines. In past decades, a lot of research has been carried out into the possible effects on people's health due to the magnetic fields generated by these lines. This research has produced varying results. Two analyses were carried out at around the turn of the century, which involved an assessment of all these results on the basis of their scientific value, after which the methodologically sound studies were combined. This revealed a weak, but statistically significant association between the occurrence of leukaemia in children aged up to 15 and the magnetic fields generated by overhead high-voltage power lines. Both the *Gezondheidsraad*<sup>2</sup> (National Health Council) and RIVM<sup>3</sup> (National Institute for Public Health and the Environment) were asked to issue recommendations on the basis of these analyses. They both came to the conclusion that the analyses were sound but also indicated that, despite the large amount of research into the matter, no indications have yet been found of a causal link between exposure to magnetic fields from high-voltage power lines and the occurrence of leukaemia in children. It is not clear whether further research in the future will show that the increased risk of leukaemia is indeed caused by these fields, or that other causes will be established.

In the memorandum entitled 'A Sensible Approach to Risks' I draw the conclusion, partly on the basis of the scientific data, of the social concern which is repeatedly apparent regarding high-voltage power lines and of the principle of precaution, that new situations in which children experience long-term exposure to magnetic fields from overhead high-voltage power lines should be avoided as often as is reasonably achievable. In doing so, I have pointed out that the social advantages and disadvantages must be taken into account and that the further interpretation of this policy should take place after consultation with those directly involved.

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<sup>1</sup> Lower House, 2004-2005, 28 089, no. 6

<sup>2</sup> GR, Recommendations no. 2000/6

<sup>3</sup> RIVM report no. 610050007/2001 and RIVM letter report 032/2003

I have limited this policy conclusion, on the basis of reasonableness criteria, to new situations because the health effects are unclear and because measures in existing situations often have socially substantial consequences (for example the relocation of dwellings or overhead high-voltage power lines). On the other hand, new situations often offer a lot more options and prevention can be considerably cheaper than redevelopment.

Following on from this, consultations have been started with representatives of, among others, the IPO (Association of Provincial Authorities), the VNG (Association of Netherlands Municipalities) and EnergieNed that involved discussions as to how this policy can best be implemented. I informed the Lower House of the results of this project and my policy conclusions at the end of 2004<sup>4</sup>. These consultations generated a significant degree of consistency and consensus in the responses of the various parties. There appears to be a need for a national uniform policy that focuses on new situations. It is in this context that the zoning instrument was suggested.

## The recommendations

**On the basis of the above, I recommend that, when determining spatial plans and the trajectory of overhead high-voltage power lines, or in the event of changes to existing plans or existing overhead high-voltage power lines, the creation of *new situations* be avoided as much as is reasonably possible, whereby children undergo *long-term stays in the areas around overhead high-voltage power lines within which the annually averaged magnetic field is greater than 0.4 microtesla (the magnetic field zone)*<sup>5</sup>.**

For the implementation of these recommendations, RIVM has developed a web site ([www.rivm.nl/hoogspanningslijnen](http://www.rivm.nl/hoogspanningslijnen)) where the *indicative zone* of each line in a province or municipality can be found. In the event of new regional or zoning plans which overlap with the *indicative zones*, I recommend that the local authorities, in consultation with the grid administrator and using the enclosed Guidelines<sup>6</sup>, determine the *specific zone* of the overhead high-voltage power lines concerned. If the new spatial plan (or an existing plan that is being changed) overlaps the *specific zone*, I then recommend that the fewest possible *sensitive designated uses* such as dwellings, crèches and day-care centres are situated in that zone (see also Annex 1). In the case of new lines, the *specific zone* can be used directly as a basis. When determining the trajectory, I recommend that, as few *sensitive designated uses* as possible are located in the *specific zone*. I also recommend that, when planning new *sensitive designated uses* or overhead high-voltage power lines, investigations are carried out to establish possible additional measures in order to narrow the *specific zone*. Examples of such measures can be found in the KEMA (Testing, Research and Engineering Consultants to the Electric Power Industry) reports of 2002<sup>7</sup>. These show that, depending on the situation and the measure, reductions in the zone width of 20%-90% are possible. However, in such contexts, the basic principle will be that the financial consequences will be borne by the party taking the initiative (in the case of a new spatial plan e.g. the local authority and in the case of a new overhead high-voltage power line the grid administrator).

In the context of the above, I regard it acceptable, on the basis of the reasonableness principle, that exceptions are made for small-scale concentrations of *sensitive uses* (for example isolated company accommodation or farms). On the other hand, the accumulation of negative environmental factors may indicate that extra precautions or measures need to be taken. The value of 0.4 microtesla will remain the basic value for the interpretation of the precautionary principle. Moreover, there is no objection to changes to existing lines or spatial plans as a result of which the number of *sensitive designated uses* does not increase in the *specific zone*.

In order to avoid claims for compensation and a loss of time, I recommend that the local authorities designate plan changes which have already been initiated and which are advanced, but not yet irrevocable, in principle as existing situations. However, wherever it is reasonably possible to implement these recommendations in cases in which the plan changes have already been initiated and not yet determined, I would still advise that this precautionary policy be taken into account.

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<sup>4</sup> Lower House, 2004-2005, 28089 no. 7

<sup>5</sup> The terms shown in italics in this letter are clarified and explained in more detail in Annex 1.

<sup>6</sup> See Annex 2

<sup>7</sup> KEMA reports 40130074-TDC 02-25766A (chapter 5) and 40130074-TDC 02-25715A

## **Relationship with other overhead high-voltage power lines policy**

In a circular from 1995<sup>8</sup> it is advised that account be taken of the recommendations from the International Radiation Protection Association and the recommendations of National Health Council, which were valid at that time.

These days, the Dutch government uses the recommendations of the European Commission<sup>9</sup> as a basis. As a result, the circular from 1995 is no longer valid. As regards overhead high-voltage power lines, it appears that the reference values that the European Commission recommends are generally not exceeded in publicly accessible places. In general terms they do not, therefore, determine spatial policy.

On the basis of private law, a "restricted use zone" generally exists around an overhead high-voltage power line. As regards these strips (two strips of usually around 30 metres calculated from the heart of the line) it has been determined that they must be kept free of buildings. On the basis of mutual consultations, the administrator of the overhead high-voltage power line can grant the site owner a full or partial exemption. In addition, the prevailing spatial plan can result in the local authority refusing to grant a building permit. Lastly, on the basis of Article 9 of the Housing Act, Article 2.5.19 of the (Model) Building Regulations 1992 is important for the granting of the building permit. On the basis of this article, a ban applies to buildings which are subject to a building permit (other than those which are part of the overhead high-voltage power line) within a distance of 6 metres from the wires intended for the conduction of electricity of the overhead high-voltage power lines. When determining this distance, account has to be taken of the movement of the wires in the wind. The Municipal Executive can grant an exemption to this ban if the electrical voltage from the overhead high-voltage power lines does not constitute a danger. I recommend that the local authorities contact the grid administrator before granting such an exemption.

Lastly I wish to point out that questions are regularly asked concerning the possible additional risks that might arise due, for example, to it being impossible or more difficult to extinguish burning homes located underneath overhead high-voltage power lines. In that context I refer to a recent study by the *Nederlands Instituut voor Brandweer en Rampenbestrijding* [Netherlands Institute for Fire Service and Disaster Management]<sup>10</sup>. One of the conclusions of this study is that there are scarcely any additional risks if the fire brigade applies the national protocol entitled '*Blussen onder hoogspanningslijnen*' [Extinguishing under overhead high-voltage power lines]. In so far as applicable for your local authority, I therefore recommend that you take cognisance of this protocol which is soon to be made available via the Netherlands Association for Fire Service and Disaster Management (<http://www.nvbr.nl/cms/show>).

## **Information**

A transparent decision-making process should be accompanied by thorough communication initiatives. It has transpired that a great deal of care needs to be paid to communication on the risks. It is for this reason that I requested that qualitative and quantitative research be carried out into the perception of overhead high-voltage power lines and possible risks in the eyes of citizens.

One of the most important conclusions is that people living near overhead high-voltage power lines prefer to receive information on the matter via their local authority. The general public, which has no direct interest in overhead high-voltage power lines, expect the national government to provide information on its website and via brochures. Moreover, it applies to both target groups that energy companies can play an information role as information channels.

In this context, the Ministry of VROM (Ministry of Housing, Spatial Planning and the Environment) has developed public awareness material on overhead high-voltage power lines that local authorities and other organisations involved can use (including the 10 most FAQ's and respective answers, an information leaflet on overhead high-voltage power lines and web texts). This public awareness material has been available since mid October, but can also be requested via [www.vrom.nl/informatiepakket](http://www.vrom.nl/informatiepakket). In October you will also be sent the digital information package by mail. Interested citizens can also visit the VROM site for additional information on overhead high-voltage power lines ([www.vrom.nl/](http://www.vrom.nl/)). If you, as a local or provincial authority, or grid administrator still require additional information on the policy and/or regulations, you can contact the InfoMil helpdesk ([www.infomil.nl](http://www.infomil.nl)) or +31 (0)70-373 5575).

## **Conclusion**

I have every faith that, using the above information, I have made clear how I decided on the recommended policy following extensive and constructive consultations with representatives of, for example, the VNG, IPO and EnergieNed. In doing so, I have opted for an advisory instrument rather than supplementary regulations because you already have sufficient possibilities to fulfil your responsibilities. Moreover, the usual feedback and response procedures guarantee sufficient contributions by citizens and other parties involved.

<sup>8</sup> Circular relating to extremely low-frequency electrical and magnetic fields (DGM/SVS/07d94006, dated 1 January 1995)

<sup>9</sup> The Council's recommendations dated 12 July 1999. Official Journal of the European Communities, L 199/59, 1999

<sup>10</sup> Homes within the danger zone of high-voltage lines: extinguishing risks, 27 June 2005 NIBRA

As far as I am concerned, my contribution to a sensible approach to this matter will comprise communication which is as clear as possible and the making available of public awareness material.

The State Secretary of Housing,  
Spatial Planning and the Environment

Drs. P.L.B.A. van Geel