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## German villagers, researchers & industry join forces for biomass

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*Note: Agri-Pulse is participating in an intensive week-long program of visits with German government agencies, renewable energy research organizations, and private companies. For more coverage, go to [www.Agri-Pulse.com](http://www.Agri-Pulse.com).*

German Social Science Professor Dr. Peter Schmuck explains why the Federal Republic of Germany is raising a bumper crop of “Bioenergy Regions.” He says it all began 10 years ago with defining a “Bioenergy Village” as “A village that covers its own heat and electricity demand with locally available biomass.” Now there are 25 designated Bioenergy Regions – the winners of a German government grant competition which attracted applications from 210 villages across the country.

Schmuck says the process has developed so rapidly because “Most people here in Germany feel we have no alternative, because we are dependent on imports from [Russia’s] Mr. Putin, so we have to develop alternatives.” The most visible sign of what’s changing may be the giant wind turbines marching across the German countryside today, along with solar panels everywhere, on barn roofs as well as city buildings. But Schmuck and Germany’s Ministry of Agriculture are counting more on biomass than wind and solar, since biomass can be stored and therefore can provide a constant source of energy – a home-grown source not controlled by another country.

Researcher Rachel Michels, Project Assistant with the Bioenergy-Region Ludwigsfelde project, explains that despite broad public support for bioenergy, project development needs to be done carefully. She quotes a recent survey showing 94.9% public support for renewable energy. But she says that general lack of knowledge, fear of change, and concerns about “food versus fuel” can lead to “avoidable misunderstandings and conflict.” To guarantee a smooth transition to renewables from reliance on finite supplies of fossil fuels and uranium, Michels helps run a program that includes “ecotainment events” and involves local villagers and a cooperative villagers created to deal with every stage of the planning and implementation process. The process also directly involves farmer Wilfried Thielicke, who raises cattle and is Ludwigsfelde’s Deputy Mayor, and organic grower Erhard Thäle.



**With some of his farmland behind him where he rotates rye, peas, corn and grass, organic farmer Erhard Thäle explains why he is switching some of his 800 hectares (2,000 acres) over to growing organic bioenergy crops. Beside him is researcher Rachel Michels who has helped create and manage the Ludwigsfelde bioenergy project. Photo: *Agri-Pulse*.**

Another key is the active participation of local industry. Local contractors will handle the work of installing the equipment and piping needed so that excess heat from the local biomass-fired combined heat and power (CHP) plant can be used to heat villagers' homes. The local electricity company now becomes the local heating company as well – while providing new stability to the local farm economy by signing long-term contracts with farmers for biomass supply.

Prof. Martin Kaupenjohann sees Ludwigsfelde using energy crops grown on 10,000 hectares of land owned by the city of Berlin, land so contaminated with heavy metals and pharmaceuticals from handling the city's wastewater for many years that it can't be used for conventional agricultural production. Since the land is barren wasteland now, raising crops here won't raise "food versus fuel" concerns. As well, Kaupenjohann's plans call for using biomass production here as a scientifically monitored test case for large-scale use of biochar for soil remediation, maximizing long-term carbon sequestration, and protecting the groundwater which lies just below the area's thin layer of sandy soil. For more information on new German biomass technology, go to: <http://www.agri-pulse.com/uploaded/20091007S.pdf>.

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**Prof. Martin Kaupenjohann, in center, and other Ludwigsfelde bioenergy project participants including (backs to camera) Dr. Peter Schmuck and Ludwigsfelde's Deputy Mayor Wilfried Thielicke, a farmer, explain plans to turn Berlin's heavy-metal and pharmaceuticals contaminated former wastewater treatment plots in the background into productive bioenergy fields. The biomass will provide biomass feedstock, clean up the land and the groundwater, and improve biodiversity. Photo: *Agri-Pulse*.**