The Blocked Lines - should they push through? Oil pipeline versus transmission line, a view through Constellation Analysis

MA UP PJ 1 Project Environmental Planning: Practice and Applied Research

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Background

Growing energy demand and a switch in energy production has led to an increasing demand for oil and transmission lines. However, these linear development projects do not go through without debate, as the two selected case studies will show.

The Keystone XL (KXL) pipeline is a proposed and controversial phase of the whole Keystone Pipeline System extending from the oil tar sands in Alberta Canada to refineries on the Gulf Coast in Texas, US. The KXL pipeline is a shorter line from Alberta Canada midway to oil tank farms in Nebraska, US, running through the top of the Ogallala Aquifer. The main issue of this last phase is the risk of oil spills along the pipeline, as it crosses highly sensitive terrain, and would lead to 17% higher GHG emissions from the extraction of oil sands compared to the extraction of conventional oil. While this pipeline would improve energy security in North America and create jobs, various assessments have been carried out, public concern and media have been heavily involved, and a (lack of) US Presidential approval are just a few aspects that make this KXL pipeline an interesting study as there are increasing energy demands, the need for transparency, and the move for better environmental protection.

We also focus on another, ‘greener’ line in Europe; a transmission line running from Germany to Poland. As Brandenburg is one of the preferred locations in Germany for the production of renewable energy, especially wind power, it has led to the increased need for new transmission lines. The so-called “Uckermarkleitung” aims to connect three electric power transformation substations on its 123 km trip from Neuenhagen (Brandenburg) via Vierraden to Bertikow and Krajnik (Poland). The project was subject to EIA at the regional planning level (Raumordnungsverfahrens) as well as the plan approval procedure (Planfeststellungsverfahren). During these procedures, a number of route alternatives were discussed, but all showed different weaknesses. Among other concerns, the transmission line could cross valuable protected areas like the Biosphere Reserve Schorfheide-Chorin, as well as settlements. In July 2014 state officials issued a plan approval, but are currently being sued on grounds of unlawful planning procedures. Until the court decides on this matter, the project proponent 50 hertz has currently paused construction activities.

Goal

In this master project, we therefore want to address these two case studies and analyze the promoting and opposing factors as examples of challenging energy infrastructure developments of concern in today’s planning practice.

Content and Tasks

The Keytone XL pipeline and the Uckermarkleitung are two prominent examples to use Constellation Analysis (CA). Both inter- and transdisciplinary projects require the cooperation of many actors, with numerous natural and technical elements, both following various laws, and each tackling their own complex problems and constellations. Using CA, you will be able to structure these complex problems within and between the lines and develop strategies to overcome obstacles presented in each project.

We will start from the following questions and in the end will come up with a research framework that allows you to assess how to improve environmentally sensitive planning during our time of increasing energy demands.
Organization

The overall goal of the first project in the master program is to provide students with a uniformly defined understanding of the procedural workflow of environmental planning and assessment processes in German and international contexts. Upon completion of the project, students should be able to apply the available planning instruments and to introduce proposals for further development from a scientific perspective. The work will be conducted in the project group (plenum) and in small student clusters. Main topics are developed independently by the participants and then discussed in the plenum. The language of the plenary and the written results will be English. Essential "soft skills" and project management methods will also be developed. The results of the project will be compiled into a final coherent project report or a journal article in compliance with the criteria on scientific working/writing. A presentation of project results will take place in an open university colloquium ("Offenes Haus") and possibly also in other formats (conference contribution...).

The project will include a field trip presumably during the week of June 08-12, 2015.

First meeting on Thursday, April 16, 2015, 14.00h in EB 414

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