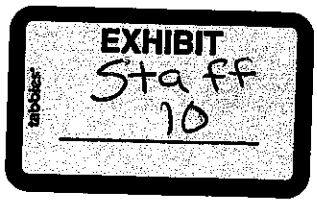
BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

DOCKET NO. HP14-002

IN THE MATTER OF THE APPLICATION OF DAKOTA ACCESS, LLC FOR AN ENERGY FACILITY PERMIT TO CONSTRUCT THE DAKOTA ACCESS PIPELINE

Direct Testimony of Dr. Michael Shelly
On Behalf of the Staff of the South Dakota Public Utilities Commission
July 6, 2015



Q: Please state your name and business address.

A: Michael Shelly, ERM, 1159 Pittsford-Victor Road, Suite 200, Pittsford, New York, 14534

Q: Describe your educational background.

A: I received a Bachelor of Science Degree in Economics with Geography from Queen Mary, University of London, England in 1981. I received a Master of Arts Degree in Economics from the University of Warwick, England in 1983. I received a Ph.D. in Economics from the University of Edinburgh, Scotland in 1988.

Q: By whom are you now employed?

A: Since May 2015 I have worked as a Senior Project Manager at ERM, attached to their office in Rochester, New York

Q: What work experience have you had that is relevant to your involvement on this project?

A: From 1990 to 1992 I was an Economic Analyst and dealt with energy issues at National Economic Research Associates in London, England. From 1992 to 2014 I was an environmental economist at Ecology and Environment, Inc., in Lancaster, New York.

Q: What work experience have you had that is relevant to your role on this project?

A: I have worked as an environmental economist for over 22 years and have worked on economic matters relating to the energy industry for 24 years. I have conducted economic impact studies using input-output models and am familiar with the IMPLAN modeling system.

Q: What methodology did you employ?

A: I reviewed Dakota Access, LLC's revised application to the South Dakota Public Utilities Commission, Dakota Access's responses to data requests from Public Utilities Commission staff, and the study prepared by the Strategic Economics Group of West Des Moines, Iowa entitled "An Assessment of the Economic and Fiscal Impacts of the Dakota Access Pipeline in North Dakota, South Dakota, Iowa and Illinois" dated November 12, 2014. I also reviewed the permit application to the South Dakota Public Utilities Commission for the Keystone XL Pipeline, entitled "Application to the South Dakota Public Utilities Commission for a Permit for the Keystone XL Pipeline Under the Energy Conversion and

Transmission Facility Act", dated March 2009, and the report entitled "Assessment of Socioeconomic Impacts Expected with the Keystone XL Pipeline Project" prepared by Dr. Michael K. Madden and dated October 2009. I also drew upon my professional experience in preparing socioeconomic sections of Environmental Impact Statements.

Q: Did you review sections 23.1 and 23.2 of the Revised Application and the Strategic Economics Group report titled "An Assessment of the Economic and Fiscal Impacts of the Dakota Access Pipeline in North Dakota, South Dakota, Iowa, and Illinois" that address the expected socioeconomic impacts the project may have in South Dakota?

A: Yes.

Q: In your opinion, does the socioeconomic impact analysis completed by Dakota Access align with similar analysis done on other projects?

A: The level of detail provided in Dakota Access, LLC's application to the South Dakota Public Utilities Commission is similar to that provided in Keystone XL Pipeline's application. However, Dakota Access, LLC's application provides information on the results of economic impact modeling using the IMPLAN modeling system, whereas the Keystone XL Pipeline application did not.

Both applications contain less information on existing socioeconomic conditions (e.g., existing demographics, employment, etc.) than is typically found in the socioeconomic sections of Environmental Impact Statements prepared for Federal agencies. This means, for instance, that it is not possible, using the information provided in the Dakota Access LLC application, to determine if pipeline construction activities would take place in areas where there might be insufficient temporary housing to accommodate the construction crews or where the need to accommodate the construction crews might negatively impact other users of such housing, such as tourists.

The economic impact modeling summarized in the application and contained in "An Assessment of the Economic and Fiscal Impacts of the Dakota Access Pipeline in North Dakota, South Dakota, Iowa and Illinois" dated November 12, 2014 and prepared by the Strategic Economics Group is comparable to that undertaken for Environmental Impact Statements prepared for Federal agencies.

Q: In your opinion, do you believe the socioeconomic impact analysis completed by Dakota Access is complete and accurate? If so, please explain.

A: The socioeconomic analysis in the Dakota Access, LLC's application covers the types of impacts considered in Environmental Impact Statements and is complete in that sense. However, as I stated in my previous answer, the amount

of detail provided in the application is less than is typically found in the socioeconomic sections of Environmental Impact Statements prepared for Federal agencies.

With regard to qualitative accuracy, in his report entitled "Assessment of Socioeconomic Impacts Expected with the Keystone XL Pipeline Project", Dr. Michael K. Madden examined the socioeconomic impacts arising from an oil pipeline permitted in South Dakota in 2009. The types and nature (i.e., positive or negative) of the actual impacts of this pipeline were expected to be similar to those anticipated for the Dakota Access LLC pipeline.

With regard to quantitative accuracy, since the application presents anticipated impacts it will not be possible until after the pipeline is constructed to determine whether the scale of the anticipated impacts accords with actual outcomes.

Q: Do you generally agree that the socioeconomic analysis completed by Dakota Access is reflective of the impacts to occur as a result of the project?

A: I generally agree that the socioeconomic analysis completed by Dakota Access, LLC covers the types of socioeconomic impacts likely to occur as a result of the project

Q: In your opinion, are there any flaws in the socioeconomic analysis? If so, please explain each flaw in detail.

A: There are no apparent major flaws in the socioeconomic analysis. However, with regard to the economic impact analysis, there is an inconsistency between the information provided in the application and the results presented in "An Assessment of the Economic and Fiscal Impacts of the Dakota Access Pipeline in North Dakota, South Dakota, Iowa and Illinois" prepared by the Strategic Economics Group with regard to the number of permanent employees during the pipeline's operational phase. In the application the number of permanent employees is given as 12, generating $2 million in (annual) labor income (p.39); whereas in "An Assessment of the Economic and Fiscal Impacts of the Dakota Access Pipeline in North Dakota, South Dakota, Iowa and Illinois" it is stated that "Once the pipeline has been built, the yearly operations and maintenance spending will add 31 permanent jobs, $1.9 Million in labor income..." (p. 5).

For the sake of consistency, either the economic impact modeling for the operational period should be revised to reflect the lower number of permanent employees reported in the application and the labor income estimate recalculated; or the number of permanent employees stated in the application should be altered to match the number given in "An Assessment of the Economic and Fiscal Impacts of the Dakota Access Pipeline in North Dakota, South Dakota, Iowa and Illinois".

Q: Did you perform an independent analysis on the expected socioeconomic impacts on South Dakota as a result of the Dakota Access Pipeline? If so, please explain the analysis you completed and any differences between your results and the results of Dakota Access's analysis. If not, please explain why you believe Dakota Access's analysis is complete and accurate.

A: No, I did not. With regard to the economic impact analysis, I did not see any major flaws in the application of the IMPLAN modeling system and, consequently, I do not believe it necessary to undertake an alternative analysis on that basis.

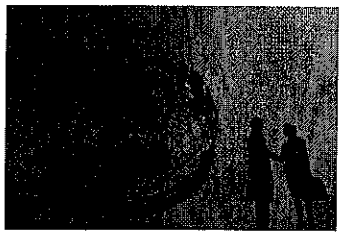
Q: In your opinion, do you believe that the Dakota Access pipeline will not pose a threat of serious injury to the social and economic condition of inhabitants or expected inhabitants in the siting area? Please explain.

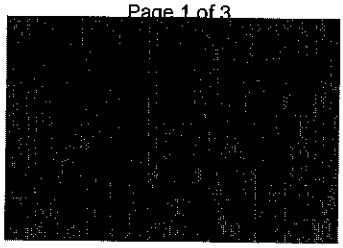
A: In my opinion, the Dakota Access pipeline will not pose a threat of serious injury to the social and economic condition of inhabitants or expected inhabitants in the siting area. During the construction period, there will be impacts to local communities resulting from the need to house construction workers. However, there will also be positive economic benefits to the local communities resulting from project expenditures in local areas, the employment of local workers and the payment of sales and use tax, gross receipts tax and tourism tax. During the operational period, there will be minor impacts to local communities due to the need to accommodate operational employees and their families. However, there will also be minor additional expenditures and tax contributions from the operation and maintenance of the pipelines and from the additional households. During the operational period, the project will generate substantial annual property tax payments (estimated in the work I reviewed at between $12 and $14 million per year). None of these impacts represents a threat of serious injury to the social and economic condition of inhabitants or expected inhabitants in the siting area.

Q: Does this conclude your testimony?

A: Yes.

Michael Shelly, PhD





Dr. Shelly is a Senior Project Officer within ERM based in Rochester, NY. He has 27 years of experience in the field of Economics.

He is a professional economist experienced in managing and completing complex environmental and environmental/health projects on five continents. He has specific experience on environmental, health, infrastructure and energy projects. He has been the project manager of multidisciplinary teams with strong analytical and quantitative skills. He has worked in a large multinational company, a specialist economics consulting company and environmental consulting.

Fields of Competence

- Economic analysis of projects
- Natural resource damage assessment
- Cost-benefit analysis
- Economic impact studies
- Environmental management plans
- Statistical and data analysis
- Hydrofracking
- Valuation of health impacts
- Climate change
- Report writing
- Proposals and SOQS

Key Industry Sectors

- Energy

Education

- Doctor of Philosophy (PhD), Economics, University of Edinburgh, Scotland, 1988
- Master of Arts (MA), Economics, University of Warwick, England, 1982
- B.Sc.(Econ), Economics, Queen Mary, University of London, England, 1981

Languages

- English, native speaker

Honors & Awards

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Key Projects

Marine Coal Spill Natural Resource Damages Claim, Colombia, Confidential Client. Author of a literature survey on the biological and chemical impacts of marine coal spills in defense of a mining company being sued by the government of Colombia for environmental damages.

Economic Impact Studies, United States, US Navy and Confidential Energy Client. Estimated the direct, indirect and induced changes in employment, earnings and economic output due to changes in personnel and aircraft numbers at military bases and for a proposed electricity transmission line linking wind energy sites to the transmission grid.

Financial Analysis of Water Supply Alternatives, State of Louisiana, State of Louisiana. Evaluated the financial viability and relative cost of alternative projects to reduce extraction from the state's five groundwater aquifers.

Naturally Occuring Asbestos Contamination, Washington State, US Environmental Protection Agency. Author of a statistical evaluation of house price impacts from naturally occurring asbestos contamination along rivers in Washington State.

Socioeconomic Impacts of Hydrofracking, New York State, Department of Environmental Conservation. Co-author of the section of New York State's Environmental Impact Statement for the hydraulic fracturing of natural gas wells ("fracking") that contained estimates of the potential income, jobs and local tax revenues arising from hydrofracking.

Health Impacts of Fertilizer Production, Morocco, Confidential Client. Author of a report on the health impacts of particulate emissions from phosphate mining and fertilizer manufacturing.

Estimation of Carbon Revenues for Electric Power Plants, New York State and Commonwealth of Pennsylvania, Confidential Clients. Estimated the revenues from potential carbon dioxide cap and trade programs for proposed coal-fired plants with carbon capture and sequestration in Jamestown and Lackawanna in New York State and a plant in Pennsylvania.

Kuwaiti Environmental Damage Claims, Kuwait and United States, State of Kuwait. Lead preparer of loss valuation reports for Kuwait's $3 billion in successful claims for environmental damage caused by Iraq during the 1990-91 Gulf War. Project manager of a large multidisciplinary, international team that prepared Kuwait's successful $109 million Gulf War environmental monitoring and assessment claims. Managed the writing of, and edited, nine programmatic management plans intended to guide field contractors as they implemented Kuwait's remediation/restoration projects funded by their Gulf War claims, and wrote the sections and reports dealing with environmental and social assessment procedures, reporting procedures, and organizational arrangements.

Natural Resource Damage Assessment and Restoration and Guidance Review, United States, Bureau of Land Management. Reviewer for the Bureau of Land Management's Natural Resource Damage Assessment and Restoration Guidance Manual.

Saudi Arabian Health Claims, Kuwait and United States, Kingdom of Saudi Arabia. Leader of the team that developed the Kingdom of Saudi Arabia's $18 billion claim for health damages resulting from the Gulf War. Appeared before the UNCC tribunal in Geneva in defense of the claim.

Smoking Health Care Costs, United States, Confidential Client. Author of a report on the impacts of smoking on health care costs related to states' multi-billion dollar toxic tort case against the tobacco companies. Used SAS to handle the data, probit analysis to model individual's decision to seek medical care, the negative binomial model to model the number of such events and used multiple regression to model medical costs.

Financial and Economic Analysis, China, World Bank and Asian Development Bank. Completed the financial and/or economic analysis of major infrastructure projects (totaling hundreds of millions of dollars) funded by the World Bank and the Asian Development Bank in China. The projects included natural gas production and distribution facilities, district heating plants, wastewater

treatment facilities, water supply projects, a cement plant, and hazardous waste treatment facilities.

Lake Clean Up Plans, China, Asian Developmen Bank and Asian Development Bank. Author of the section of the Tai Lake (near Shanghai) water quality improvement plan that suggested repayment sources for the China Development Bank proposed $2 billion loan. Prepared the implementation costs, benefit estimates and timetables, and nominated the responsible implementing agencies, for the Chao Lake (China) water quality improvement plan financed by the Asian Development Bank.