

NORTH DAKOTA PIPELINE COMPANY LLC

MINNESOTA PUBLIC UTILITIES COMMISSION

MPUC DOCKET NO. PL-6668/CN-13-473
OAH DOCKET NO. 8-2500-31260

DIRECT TESTIMONY OF RICHARD W. LICHTY, Ph.D.

AUGUST 8, 2014

1 **Q. Please state your name.**

2 A. My name is Richard W. Lichty, Ph.D.

3 **Q. On whose behalf are you filing testimony?**

4 A. I am testifying on behalf of North Dakota Pipeline Company LLC (“NDPC”).

5 **Q. What is your area of expertise?**

6 A. I am a Professor Emeritus from the University of Minnesota Duluth. I have been
7 teaching economics since 1965. I have several peer reviewed articles, and I am the co-
8 author of Urban Regional Economics: Concepts, Tools, Applications, a University Press
9 textbook published by Iowa State University Press. I served as Acting Director of the
10 Minnesota State Council on Economic Education, and as Director of the UMD Bureau of
11 Business and Economic Research. My complete qualifications and experience are listed
12 on my attached “Local Economic Impacts Analysis of the North Dakota Pipeline
13 Company LLC Sandpiper Pipeline Project” dated August 8, 2014 (**Schedule 1**) (the
14 “Analysis”).

15 James Skurla assisted with preparation of the Analysis. Mr. Skurla is a former director of
16 the UMD Bureau of Business and Economic Research, and has more than 30 years
17 experience in economic development. Mr. Skurla’s qualifications and experience are
18 attached to the Analysis.

19 **Q. What is the purpose of the Analysis and your testimony?**

20 A. NDPC asked me to perform an analysis of the economic benefits that will accrue to the
21 State of Minnesota and to the eight counties along the preferred route where the proposed
22 Sandpiper Pipeline Project (“Project”) will be constructed and operated by NDPC, as
23 indicated in NDPC’s Application for a Certificate of Need in this matter. The Analysis
24 provides a prediction of economic benefits from construction and operation of the Project
25 using an input-output model. The Analysis is limited to the impacts on jobs and

26 economic output. Benefits within the petroleum marketplace are not included in the
27 Analysis.

28 **Q. What is your conclusion?**

29 **A.** As described in the Analysis, construction and operation of the Project will have
30 significant economic benefits to the State of Minnesota and to the counties in which the
31 Project is constructed and operated. Input-output modeling is widely used to predict the
32 effects of a series of complicated economic transactions. For the Analysis, I used an
33 input-output modeling system known as IMPLAN to formulate predictions of the direct,
34 indirect, and induced effects of constructing and operating the Project.

35 As explained in more detail in my Analysis, I conclude that construction of the Project
36 will be responsible for 12,937 jobs, \$750,387,407 in labor income, and total economic
37 output, at a statewide level, of \$2,092,083,091. Operation of the Project, following the
38 first year, is expected to be responsible for 2,513 jobs, \$178,755,775 in labor income, and
39 total economic output of \$609,187,632 on an annual basis.

40 These economic benefits are significant for the State of Minnesota and the counties
41 where the Project will be constructed.

42 **Q. Does this conclude your direct testimony?**

43 **A.** Yes, it does.

**Local Economic Impacts Analysis
of the
North Dakota Pipeline Company LLC
Sandpiper Pipeline Project**

Prepared by Dr. Richard Lichty and James Skurla

August 8, 2014

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I. Introduction

A. Purpose of this Economic Analysis

This Local Economic Benefits Analysis (“Analysis”) provides the Minnesota Public Utilities Commission (“MPUC”) with a prediction of the economic benefits that will accrue to the State of Minnesota and to eight counties along the preferred route where the proposed Sandpiper Pipeline Project (the “Project”) will be constructed and operated by North Dakota Pipeline Company LLC (“NDPC”). This Analysis provides a brief executive summary of the anticipated economic benefits, explains the purpose and use of economic impact modeling, then provides a detailed review of the expected economic impacts created by the Project.

B. Executive Summary

The Project will have significant economic benefits to Minnesota. The Project is a vast undertaking and huge private investment in the State. The estimated Project construction costs of approximately \$1.1 billion are expected to exceed the announced construction costs of the new Minnesota Vikings stadium by more than \$111 million. Further, the Project will provide significant economic benefits in a rural region of Minnesota which lags behind statewide average economic indicators. Construction of the Project alone is expected to be responsible for an estimated 12,937 jobs, \$750,387,407 in labor income, and total economic output of \$2,092,083,091.¹

Ongoing operations of the Project will have similarly significant economic impacts. In the first partial year of operations alone, the Project is expected to be responsible for supporting 1,554 jobs, \$112,839,536 in labor income, and a total economic output of \$376,685,781. During the following years, operation of the Project is predicted to be responsible for supporting 2,513 jobs per year, \$178,755,775 in labor income, and total economic output of \$609,187,632 on an annual basis.²

These economic benefits are significant for the state and the counties where the Project will be located. Many industries will see significant gains in jobs and labor income, and a rural portion of the state will see significant gains, which will multiply as they spread through the economy. These benefits should be taken into account by the MPUC when considering NDPC’s Application for a Certificate of Need for the Project (the “Application”).

C. Author Experience

This Analysis was prepared at NDPC’s request by Dr. Richard Lichty, a Professor Emeritus of the University of Minnesota Duluth, with assistance from Mr. James Skurla, former director of the UMD Bureau of Business and Economic Research (“BBER”).

¹ The jobs figures presented here include direct, indirect, and induced employment. Employment is defined by the Bureau of Labor Statistics (see Footnote 12). All job figures in this Analysis have been rounded to the nearest whole number.

² Forecasted jobs per year of operations are not cumulative.

Dr. Lichty began his career as a university professor in 1965 as a visiting instructor at Kansas State Teachers College in Emporia, Kansas. Dr. Lichty worked as a Graduate Research Assistant at Kansas State University, where he worked on the development of one of the early sub-national input-output tables for the State of Kansas under the direction of Professor Jarvin Emerson, a leader in regional economic modelling. Dr. Lichty has several peer reviewed articles to his credit and is the co-author of Urban Regional Economics: Concepts, Tools, Applications, a University Press textbook published by Iowa State University Press. Dr. Lichty served as Acting Director of the Minnesota State Council on Economic Education, as Director of the University of Minnesota Duluth Center for Economic Education, and as Director of the BBER. Dr. Lichty was inducted into the University of Minnesota's Academy of Distinguished Teachers before retiring from the University of Minnesota in 2007. Dr. Lichty's Curriculum Vitae is attached as Appendix 1.

James Skurla was the Director of the BBER at the University of Minnesota Duluth from 2003 to his retirement in June, 2014. Mr. Skurla has more than 30 years of experience in economic development. As Director of the BBER, Mr. Skurla conducted and supervised regional economic and business research, including publication of 31 reports during his tenure as BBER Director. Mr. Skurla also served as Business Development Specialist at UMD's Natural Resources Research Institute Business Group from 1978 to 2004, where he developed business opportunities for aquaculture, wood, peat and clay products. Mr. Skurla also served as an instructor in the UMD Department of Economics from 1977 to 1983. Mr. Skurla has significant expertise in developing business plans, conducting economic impact and feasibility studies, performing business assessments, and loan packaging. Mr. Skurla's Curriculum Vitae is attached as Appendix 2.

II. Input-Output Modeling Using IMPLAN

Understanding cause and effect on a large scale in complicated economic systems is a major challenge for decision makers. It is easy to understand the immediate economic impact of a comparatively small transaction, such as the purchase of a vehicle. The purchaser gains a car but loses money. The seller loses a car, but gains money. Impacts, however, become much more difficult to predict when many transactions are examined at a macroeconomic scale. What are the impacts of thousands of vehicle purchases on a regional economy? How many additional workers will be employed by manufacturers if more cars are built and sold? How many other industries, such as parts suppliers, will see economic benefits? What will those benefits be? How will employees of the parts suppliers impact the economy by purchasing groceries, housing, and entertainment? Decision makers must be able to evaluate these indirect effects as they spread through the economy. That is the role of input-output modeling in decision making.

Input-output modelling is widely used to predict the effects of a large series of complicated economic transactions. Input-output modeling uses a mathematic representation of a region's economy to predict the effect of changes in one industry on others, and impacts of consumers, government, and suppliers on the economy in a specific region. In other words, input-output modeling shows how the output of one regional industry is an input to other regional industries. This demonstrates how dependent each industry is on all the others in the economy, where industries depend on each other for success. Input-output economics is widely used to study regional economies within a nation, as well as a tool for national and regional economic planning. In addition, a main use of input-output analysis is to predict

the economic impact of an event on all of the intertwined economic sectors in a specific area. That is the purpose of this Analysis.

The inventor of input-output modeling, which is now used worldwide, was awarded the Nobel Prize in 1973. Thousands of users of various input-output systems are currently conducting such analyses in the United States because it is a widely-accepted way to assess the interactions of various parties to a regional economic system.

Input-output modeling uses two sources of data. The first is the specific input under review. In this Analysis, that is the estimated \$1,086,000,000 that will be spent by NDPC to construct approximately 302 miles of the Project along the preferred route in Polk, Red Lake, Clearwater, Hubbard, Cass, Crow Wing, Aitkin, and Carlton counties, Minnesota (the "Eight Counties").³ The second source is a set of databases that can be manipulated by software.

This Analysis relies on IMPLAN, an economic modeling software and data package. IMPLAN is used by more than 2,000 public and private institutions for economic modelling. Here in Minnesota, IMPLAN is used by the Minnesota Department of Agriculture, the Minnesota Office of the Legislative Auditor, and the Minnesota Pollution Control Agency among other state agencies, many universities, and federal agencies.⁴

IMPLAN provides a highly accurate and adaptable model. The IMPLAN database contains economic statistics organized by county, state, and zip code. This allows more accurate predictions by using data that is specific to each region, instead of using estimates from national averages.⁵ These statistics are used to measure the effect of a given change or event on a regional or local economy.

IMPLAN uses two primary systems to predict economic impacts. The first is called a social accounting system, which describes transactions between producers and intermediate and final consumers. As described by IMPLAN, the social accounting matrix "includes all commodity flows, not only purchases and production of sales of commodities, but transfer payments to and from institutions."⁶

³ The Application, as revised on January 31, 2014, gives the construction cost within Minnesota as \$1.2 billion. The lower figure was used in this Analysis for two reasons. First, that is the number that was used by Dr. Promboin to estimate the impacts listed in the Application, as discussed below. Second, use of the lower number is a more conservative estimate for the purposes of input/output modeling. Using a higher number would yield higher impacts.

⁴ Client list provided by IMPLAN Group LLC.

⁵ IMPLAN data files use various federal government data sources, including but not limited to: U.S. Bureau of Economic Analysis Benchmark I/O Accounts of the U.S.; U.S. Bureau of Economic Analysis Output Estimates; U.S. Bureau of Economic Analysis REIS Program; U.S. Bureau of Labor Statistics County Employment and Wages (CEW) Program; U.S. Bureau of Labor Statistics Consumer Expenditure Survey; U.S. Census Bureau County Business Patterns; U.S. Census Bureau Decennial Census and Population Surveys; U.S. Census Bureau Economic Censuses and Surveys; and U.S. Department of Agriculture Crop and Livestock Statistics.

⁶ IMPLAN User's Guide, Analysis Guide, Data Guide, MIG, Minnesota IMPLAN Group, 1999-2004, p. 74.

The second system is a multiplier model. Multipliers are a numeric way of describing the impact of a change. For example, an employment multiplier of 1.9 would suggest that for every 10 employees hired in the given industry, 9 additional jobs would be added to the given economic region.

Use of both the social accounting and multiplier systems provides a clear picture of the economy in any given region. The economy's reaction to a defined event, such as the construction and operation of the Project, can then be modeled.

IMPLAN allows economic impacts to be modeled at three levels, called direct, indirect, and induced effects. Direct effects are the specific effects caused directly by an action. In this case, that action is the construction of the Project. Indirect effects are benefits to businesses that flow from construction of the Project. One example of an indirect effect is money paid by NDPC to a business to purchase supplies needed for construction, such as gravel or fuel. Induced effects are caused by incomes (including wages, interest, rents, and other profits) earned by local people from the Project to purchase other goods. For example, a business supplying NDPC with construction materials will use some of the money received from that sale to pay its employees. Those employees, in turn, will use that income to purchase goods and services that they need from the local economy. Those purchases will be induced effects.

III. Economic Impacts of the Project

The following sections describe the results of a prior study prepared for NDPC using the RIMS II model, followed by a detailed explanation of the results of this Analysis using IMPLAN, which the authors selected to provide greater detail in this Analysis.

A. RIMS II Analysis

Dr. Ronald Promboin conducted a study to assist NDPC with development of the Application.⁷ In Dr. Promboin's analysis, employment and output impact estimates were constructed using construction and permanent use data provided by NDPC in conjunction with state level multipliers taken from the United States Department of Commerce's Regional Input-Output Modeling System (RIMS II). RIMS II was developed and is used by the United States Department of Commerce, Bureau of Economic Analysis.

Dr. Promboin's analysis estimated that over 17,315 person-years of employment would be generated during the construction phase⁸ of the Project, with total output impacts of \$2.4 billion generated during that same period. Permanent operations, beginning in 2016, were estimated to generate in excess of 2,000 person-years of employment and \$450 million in output. Continuing operations beyond 2016 through 2025 were estimated to generate 3,352 person-years of employment and \$725 million in output.

RIMS II produced slightly higher economic predictions than IMPLAN. That is not to say that the results of the RIMS II study are invalid; they are simply different because the model is different. Differences are to be expected given the nature of economic modeling, which provides predictions of future events in

⁷ Dr. Ronald Promboin, Minnesota Economic Impacts: Sandpiper Project, October 9, 2013.

⁸ Starting in the fourth quarter of 2014 and continuing through 2015.

extremely complicated systems. The results of Dr. Promboin's RIMS II study are compared to those produced by the IMPLAN model at the end of this Analysis.

B. IMPLAN Analysis

The following sections provide the results of the IMPLAN analysis, first at the state level, then for the Eight Counties.⁹

1. State Economic Impacts

Minnesota's Gross Domestic Product ("GDP"), the value of all finished goods and services produced, was \$312 billion in 2013.¹⁰ Minnesota ranked 13th in the nation in growth of GDP between 2010 and 2013, and 5th among the Plains and Great Lakes States,¹¹ behind North Dakota, South Dakota, Nebraska, and Iowa. Leading industries contributing to Minnesota's GDP growth include: Agriculture, Forestry and Fisheries; Non-Durable Goods Manufacturing; Real Estate Rental/Leasing; Wholesale Trade; Retail Trade; Professional, Scientific and Technical Services; Management of Companies and Enterprises; and Health Care and Social Assistance. Minnesota's unemployment rate is 4.8%, below the national average of 6.3%.¹² Minnesota's unemployment rate is the 10th lowest in the United States.¹³ Minnesota's unemployment rate is 5th out of the 14 Plains and Great Lakes states, behind North Dakota, South Dakota, Nebraska, and Iowa. Minnesota outperformed the national economy in rate of growth in GDP and in the rate of unemployment throughout the recent recession and recovery. In short, Minnesota's economy is and has been strong relative to other upper Midwestern states. Much of that performance, however, occurred in the Twin Cities Metropolitan Statistical Area.¹⁴ Rural areas in Minnesota have not been as strong, as discussed in greater detail below.

⁹ Impacts for the Project models used the most recent IMPLAN data available, which is for the year 2012. All results are reported in 2013 dollars unless otherwise noted.

¹⁰ U.S. Bureau of Economic Analysis Estimate.

¹¹ Great Lakes States include: Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin. There is more than one definition of Plains States. Using the Oxford Dictionary, Plains States include: North and South Dakota, Nebraska, Kansas and sometimes Iowa and Missouri.

¹² Bureau of Labor Statistics.

¹³ The definition of "employed" for purposes of this statistic is "an individual 16 years old or older who, in a given week, (a) works minimum one hour for an emolument or minimum 15 hours of unpaid work in a family business, or (b) who is not working but has a job or business from which he or she is temporarily absent, whether or not being paid for the time off." Bureau of Labor Statistics Glossary, available on-line at <http://www.bls.gov/bls/glossary.htm>.

¹⁴ As defined by the Office of Management and Budget in 2013: Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, LeSueur, Mille Lacs, Ramsey, Scott, Sherburne, Sibley, Washington and Wright Counties in Minnesota and Pierce and St. Croix Counties in Wisconsin.

The IMPLAN model predicts significant benefits to Minnesota's economy from construction of the Project. Table 1, below, summarizes the predicted impacts.

Table 1				
Total Estimated Construction Impacts 2014-2015 (Statewide)¹⁵				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	6,338	\$397,345,996	\$480,447,716	\$1,085,999,952
Indirect Effect	2,954	\$183,005,772	\$285,433,558	\$508,389,581
Induced Effect	3,645	\$170,035,639	\$310,430,956	\$497,693,557
Total Effect	12,937	\$750,387,407	\$1,076,312,230	\$2,092,083,091

Table 1 (and subsequent tables) includes columns for Employment, Labor Income, Value Added, and Output impacts. The direct effect employment data is generated by IMPLAN from the construction cost of the Project, and represents the total of full and part-time employees IMPLAN expects to be involved during construction. The input-output assumption is that employees are locally available either through increases in the labor force or new workers moving to the area. IMPLAN also assumes that local industries are operating at capacity so that the indirect and induced effects are new employees. The output increase can be handled at least partially without new hires if local industries have excess capacity with existing employees. This is only of significance, however, for the indirect and induced effects. For example, induced effects are purchases made with income earned by individuals resulting from indirect expenditures, such as NDPC or its contractors purchasing construction supplies. The employees of the business that sold construction supplies will take their income from their jobs and spend it at other businesses, such as grocery stores. In this example, both the construction supply business and the grocery store may be able to accommodate the increased business caused by the Project through the use of existing employees instead of newly hired employees. There is no way for any input/output modeling system to account for this possibility.¹⁶

The "labor income" column provides IMPLAN's prediction of before-tax income earned from producing the region's output. Value Added is one approach to estimating the region's GDP. It consists of locally earned wages, interest, rents and profits associated with producing the region's output. The Output column provides IMPLAN's predicted total economic impact by adding both the direct, indirect and induced impacts on local industries plus the final users of the region's goods and services. Final users of goods and services include government, physical investment, household consumption, and exports minus imports (a second approach for measuring the region's GDP).

¹⁵ IMPLAN Scenario Impact Summary.

¹⁶ Properly adjusting for this issue would require detailed surveys of every business in each sector that could be impacted by the Project, using specific assumptions to determine how each business would react to additional economic activity. Such an undertaking is beyond the scope of this Analysis, and likely not possible under any scenario.

The direct, indirect, and induced effects of construction will be spread among multiple industries. Unsurprisingly, the greatest impact will be to the construction sector, with other significant impacts to industries that typically support large construction projects. The top ten impacts from the construction phase of the Project are shown in Table 2.¹⁷

Industry Description	Employment	Labor Income	Value Added	Output
Construction of other new nonresidential structures	6,338	\$397,345,996	\$480,447,716	\$1,085,999,952
Architectural, engineering, and related services	653	\$45,407,446	\$46,229,752	\$76,570,336
Food services and drinking places	489	\$10,245,026	\$15,802,019	\$28,621,767
Employment services	268	\$8,103,184	\$9,070,378	\$10,898,175
Wholesale trade businesses	265	\$25,049,710	\$39,270,901	\$57,609,886
Real estate establishments	211	\$4,355,903	\$32,003,835	\$38,640,991
Private hospitals	194	\$14,624,305	\$16,525,908	\$28,884,489
Offices of physicians, dentists, and other health practitioners	185	\$17,690,053	\$18,113,777	\$26,453,251
Retail Stores - General merchandise	175	\$4,784,252	\$7,714,390	\$9,693,241
Civic, social, professional, and similar organizations	159	\$5,033,289	\$3,954,060	\$6,908,047

Table 2 demonstrates the economic impacts of a construction endeavor on the scale of the Project, which is \$ 111 million more than the total estimated construction cost of the new Vikings Stadium in Minneapolis.¹⁹

Economic impacts are not limited to construction of the Project. IMPLAN is able to estimate the impact from ongoing operation of the Project after the construction phase. Ongoing operation requires a smaller workforce, and, accordingly, produces a lesser impact than the construction phase. Table 3

¹⁷ IMPLAN predicts direct, indirect, and induced impacts to more than 440 sectors of the economy. The top ten were selected here because they capture the majority of economic impacts caused by construction of the Project.

¹⁸ IMPLAN Scenario Summary.

¹⁹ New Stadium Q&A, available online at <http://www.vikings.com/stadium/new-stadium/faq.html#cost> (last visited July 31, 2014).

summarizes the impact estimates at a state-wide level from the first partial year of operation, which NDPC plans to begin in 2016.

Table 3				
Impact From First Year Of Operation (Statewide)²⁰				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	453	\$55,676,778	\$84,193,164	\$201,599,994
Indirect Effect	552	\$31,540,562	\$52,503,488	\$100,076,632
Induced Effect	549	\$25,622,196	\$46,788,536	\$75,009,155
Total Effect	1,554	\$112,839,536	\$183,485,188	\$376,685,781

The greatest impact of the first year of operations, excluding the pipeline transportation sector, will be in the employment services sector of the economy, which is predicted to have 122 jobs, \$3,686,990 in labor income, and a total output of \$4,958,725. Maintenance and repair and construction of nonresidential structures, the second most impacted industry other than pipeline transportation, is predicted support 94 jobs during the first year of operation, with a total of \$6,022,078 in labor income and total output of \$14,600,965. In all, operation of the Project over the first partial year is expected to support 1,554 jobs, \$112,839,536 in labor income, and a total economic output of \$376,685,781.

The economic impacts of operating the project will, of course, extend well beyond the first year. Table 4 summarizes the annual impact estimates for the years 2017 to 2025 on a state-wide basis.

Table 4				
Annual Impacts From 2017-2025 (Statewide)²¹				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	733	\$88,200,873	\$133,375,365	\$331,951,951
Indirect Effect	893	\$49,965,268	\$83,173,878	\$158,590,458
Induced Effect	888	\$40,589,635	\$74,120,484	\$118,645,223
Total Effect	2,513	\$178,755,775	\$290,669,727	\$609,187,632

The total impact of supporting 2,513 jobs and \$609,187,632 in output will be distributed among a number of industries. If the pipeline transportation industry is excluded, the greatest benefits will be felt on an annual basis by the “employment services” industry, with 197 jobs supported, \$5,840,778 in

²⁰ IMPLAN Scenario Summary.

²¹ IMPLAN Scenario Summary.

labor income, and total output of \$7,832,577. The next highest impact in terms of employment will be experienced, again on an annual basis, by the “maintenance and repair construction of nonresidential structures” sector, with 153 jobs supported, \$9,539,929 in labor income, and \$23,309,140 in annual economic output. The “food services and drinking places” sector is predicted to see an annual benefit of 111 jobs, \$2,288,316 in labor income, and total economic output of \$6,375,998. IMPLAN’s job predictions for ongoing operations are not cumulative. In other words, the economy will not experience 2,513 new jobs per year as a result of operation of the Project. Rather, the output of the Project is predicted to support that number on a yearly basis.

2. Economic Impacts to the Eight Counties

One of the primary benefits of IMPLAN is that it also estimates the impacts to the Eight Counties where the Project will be constructed. Unfortunately, the rural counties in Northern Minnesota have significant rates of unemployment, in contrast to other parts of the state, such as the Minneapolis/St. Paul metropolitan area. Table 5 presents the rates of unemployment in Northern Minnesota, with the Eight Counties in bold text.

Table 5 County Unemployment Levels, June 2014. ²²					
County	Unemployment Rate	County	Unemployment Rate	County	Unemployment Rate
Aitkin	6.0%	Itasca	6.8%	Pennington	3.8%
Becker	4.4%	Kanabec	7.7%	Pine	6.1%
Beltrami	6.0%	Kittson	4.4%	Polk	4.5%
Carlton	5.5%	Koochiching	9.2%	Red Lake	5.0%
Cass	6.5%	Lake	4.3%	Roseau	3.8%
Clay	2.8%	Lake of the Woods	5.6%	St. Louis	5.7%
Clearwater	9.5%	Mahnomen	6.3%	Todd	4.6%
Cook	4.8%	Marshall	5.3%	Traverse	4.4%
Crow Wing	5.1%	Mille Lacs	7.0%	Wadena	5.9%
Douglas	3.5%	Morrison	5.6%	Wilkin	2.8%
Grant	4.6%	Norman	4.6%		
Hubbard	6.1%	Otter Tail	4.3%		

²² Minnesota Department of Employment and Economic Development. The selected counties compose the northern portion of the state, using a line arbitrarily drawn across the northern borders of Big Stone, Stevens, Pope, Stearns, Benton, Sherburne, Isanti, and Chisago counties.

The Eight Counties are rural counties with fairly low populations. Table 6 provides the state totals and each county's totals for population, per capita income, and two interesting statistics -- the percentage of net personal income devoted to maintenance (including such things as Supplementary Security Income benefits, Earned Income Tax Credit, and Food Stamps as well as other general assistance programs),²³ and the percentage of net personal earnings devoted to total transfer payments. In economic terms, transfer payments are payments made for which no corresponding production of goods or services takes place at the time of payment, such as private retirement, Social Security, and Medicare benefits, veteran's benefits, unemployment benefits, and education/training benefits.

A significant portion of the net income in each of the counties comes from transfer payments. In fact, transfers as a percentage of net income are above 50% in half of the Eight Counties, and in every instance but three are above the overall rate for the state of Minnesota. This is not uncommon for counties located in Northern Minnesota. Per capital income in the counties in Northern Minnesota is also generally lower than the state's average. The Eight Counties are presented in bold text in Table 6.

Table 6 Minnesota State Population, Per Capita Income, Maintenance and Total Transfers as Percentages of Net Income²⁴				
Region	Population	Per Capita Income (2012 Dollars)	Maintenance as a % of Net Earnings	Transfers as a % of Net Earnings
Minnesota State	5,379,139	\$46,925	3.1%	23.2%
Aitkin	15,927	\$34,084	5.8%	72.2%
Becker	33,000	\$40,273	4.5%	43.4%
Beltrami	45,375	\$33,223	9.0%	54.6%
Carlton	35,348	\$33,329	3.8%	46.5%
Cass	28,357	\$40,033	7.2%	68.3%
Clay	60,155	\$38,549	3.0%	28.7%
Clearwater	8,703	\$31,945	6.9%	61.4%
Cook	5,185	\$45,001	2.8%	44.6%
Crow Wing	62,882	\$34,873	5.0%	55.8%

²³ For this Analysis, public assistance consists largely of Supplemental Security Income (SSI) payments; Earned Income Tax Credits (EITC); family assistance; general assistance; expenditures for food under the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); Supplemental Nutrition Assistance Program (SNAP); and other assistance benefits.

²⁴ Analysis of data from the U.S. Department of Commerce Bureau of Economic Analysis.

Table 6 Minnesota State Population, Per Capita Income, Maintenance and Total Transfers as Percentages of Net Income²⁴				
Region	Population	Per Capita Income (2012 Dollars)	Maintenance as a % of Net Earnings	Transfers as a % of Net Earnings
Douglas	36,415	\$41,027	2.9%	38.2%
Grant	5,944	\$52,660	2.2%	31.5%
Hubbard	20,347	\$33,934	5.2%	58.6%
Itasca	45,221	\$35,177	5.4%	58.0%
Kanabec	16,005	\$33,202	4.8%	50.1%
Kittson	4,493	\$51,025	2.0%	33.1%
Koochiching	13,208	\$36,182	4.8%	55.7%
Lake	10,818	\$44,191	2.7%	42.1%
Lake of the Woods	3,973	\$34,301	4.9%	64.6%
Mahnomen	5,536	\$32,615	11.3%	68.8%
Marshall	9,449	\$49,096	2.0%	28.5%
Mille Lacs	25,740	\$30,839	5.6%	55.2%
Morrison	33,052	\$35,874	3.7%	39.3%
Norman	66,034	\$51,151	2.7%	32.6%
Otter Tail	57,288	\$40,170	3.3%	43.5%
Pennington	14,074	\$49,817	2.6%	28.4%
Pine	29,218	\$30,568	6.0%	54.5%
Polk	31,416	\$43,571	3.2%	34.1%
Red Lake	4,087	\$39,563	2.9%	30.2%
Roseau	15,476	\$42,925	2.1%	22.9%
St. Louis	200,319	\$39,976	4.1%	41.0%
Todd	24,509	\$33,787	4.8%	47.4%
Traverse	3,451	\$65,115	1.9%	26.5%

Table 6 Minnesota State Population, Per Capita Income, Maintenance and Total Transfers as Percentages of Net Income²⁴				
Region	Population	Per Capita Income (2012 Dollars)	Maintenance as a % of Net Earnings	Transfers as a % of Net Earnings
Wadena	13,767	\$32,497	7.5%	72.7%
Wilkin	6,585	\$52,343	1.9%	27.1%

This indicates that the economic stimulus provided by construction and operation of the Project will make a significant and beneficial impact to the economies of the Eight Counties. The benefits will be felt during construction and also well into the future from ongoing operation of the Project.

Construction of the Project will have significant impacts on the Eight Counties where the Project will be located. For the purposes of this Analysis, it is assumed the entire direct impact from construction will be felt in the Eight Counties because that is where the majority of the activity will take place. Therefore, the initial inputs are the same as for the state construction impacts. Table 7 presents the summary of construction impacts to the Eight Counties predicted in 2014-2015.

Table 7 Eight County Construction Impacts²⁵				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	6,338	\$274,612,771	\$369,527,714	\$1,072,129,945
Indirect Effect	2,075	\$70,059,263	\$128,721,011	\$238,937,728
Induced Effect	1,499	\$43,632,502	\$101,265,045	\$161,690,199
Total Effect	9,912	\$388,304,536	\$599,513,770	\$1,472,757,872

Table 8 presents the 10 most impacted industries in the region, which will enjoy the majority of the 9,912 supported jobs and \$1,472,757,872 economic impact from the Project predicted by IMPLAN, shown in Table 7 above. Like the state-wide impacts, the greatest impacts will be felt in the construction industry, as well as in other sectors that support large construction projects.

²⁵ IMPLAN Scenario Run.

Table 8 Top Industries Impacted by Construction in the Eight Counties²⁶				
Industry Description	Employment	Labor Income	Value Added	Output
Construction of other new nonresidential structures	6,338	\$274,612,771	\$369,527,714	\$1,072,129,945
Architectural, engineering, and related services	454	\$14,678,275	\$15,237,570	\$35,429,093
Food services and drinking places	275	\$4,154,024	\$7,220,328	\$14,248,376
Civic, social, professional, and similar organizations	174	\$2,821,901	\$1,666,933	\$4,776,741
Automotive repair and maintenance, except car washes	148	\$4,185,064	\$4,740,197	\$8,973,489
Wholesale trade businesses	117	\$5,528,817	\$11,693,585	\$20,035,114
Retail Stores - Food and beverage	114	\$2,575,315	\$3,626,102	\$5,523,682
Legal services	112	\$2,059,921	\$6,465,451	\$9,486,289
Services to buildings and dwellings	103	\$1,511,810	\$2,306,582	\$4,878,237
Accounting, tax preparation, bookkeeping, and payroll services	101	\$3,428,001	\$7,215,429	\$9,216,172

Ongoing operations for the Project will also have significant impacts for the Eight Counties. Table 9 shows the first year of operations impact in 2016, which is a partial year of operation.

Table 9 Eight County Impacts from First Year's Operations²⁷				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	421	\$65,645,587	\$91,629,024	\$205,280,709
Indirect Effect	318	\$10,261,046	\$19,318,378	\$36,072,571
Induced Effect	327	\$9,533,463	\$22,125,021	\$35,324,048
Total Effect	1,067	\$85,440,097	\$133,072,423	\$276,677,329

²⁶ IMPLAN Scenario Run.

²⁷ IMPLAN Scenario Run.

These impacts, like those of construction, will be spread across multiple local industries. Excluding the pipeline industry, the greatest benefit of the first year of operation will be felt by the “maintenance and repair construction of nonresidential structures” sector, with predictions of 93 jobs supported, \$3,512,425 in labor income, and \$11,924,254 in total output. Food services and drinking places are expected to benefit by support for 50 jobs, \$759,239 in labor income, and total economic output of \$2,604,202. Employment services are expected to have 42 jobs supported, \$612,547 in labor income, and output of \$1,035,857.

Operations will continue to have positive economic impacts after the first year. Table 10 shows the Eight County impact from operations in years 2017-2025, on an annual basis.

Table 10				
Eight County Impact Totals from Operations Years 2017-2025²⁸				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	694	\$110,336,329	\$154,008,982	\$331,951,941
Indirect Effect	524	\$17,246,646	\$32,470,103	\$60,521,415
Induced Effect	539	\$16,023,733	\$37,187,475	\$59,502,051
Total Effect	1,756	\$143,606,708	\$223,666,560	\$451,975,407

Again, these impacts will be spread among multiple industries. Excluding the pipeline transportation industry, the highest annual benefits will be felt by the “maintenance and repair construction of nonresidential structures” industry, with a predicted 153 jobs supported, \$5,903,643 in labor income, and total output of \$19,888,329 in output per year. In the long term, the food services and drinking places sector comes in next, with annual predictions of 83 jobs supported, \$1,276,120 in labor income, and total output of \$4,388,329. In total, annual operation of the Project is expected to support 1,756 jobs, \$143,606,708 in employment income, and \$451,975,407 in total economic benefits per year in the Eight Counties.

C. Comparison of RIMS II and IMPLAN Results

The results of Dr. Promboin’s RIMS II study and this Analysis are compared below in Table 11. As discussed above, the two models use different data sets and different multipliers to arrive at their predictions. IMPLAN uses lower multipliers, and therefore produces lower predicted impacts than RIMS II, as demonstrated below.

²⁸ IMPLAN Scenario Run.

Table 11		
RIMS II and IMPLAN Comparison		
	RIMS II	IMPLAN
Construction Phase		
• Person-Years of Employment	17,315	12,936.4
• Output Impact	\$2.4 billion	\$2.092 billion
First Year Operations		
• Person-Years of Employment	2,000+	1,553.8
• Output Impact	\$450 million	\$377 million
Ongoing Operations		
• Person-Years of Employment	3,352	2,512
• Output Impact	\$725 million	\$609 million

The differences in results simply show that different models produce different results. RIMS II and IMPLAN are both widely used and well respected input-output models. The state-wide results from these two models are close in their estimates even though their input-output tables are constructed under different assumptions. Both models demonstrate the significant and beneficial economic impacts of the Project on Minnesota as a whole and specifically in the Eight Counties crossed by the preferred route.

IV. Conclusion

The Eight Counties in question, like most rural counties in the northern part of Minnesota, all have a significantly higher percentage of transfers as a percentage of net income than that of the State of Minnesota. Nearly every county has income maintenance requirements greater than that of the State. Finally, the unemployment rates for the eight counties are all higher than that of the State, with the exception of Polk County, where the unemployment rate is a mere 0.1% lower than the state level.

Attracting industries to these regions is often difficult. This Analysis shows that the Project will help the residents of the Eight Counties find employment and income. The Project offers an opportunity to replace economic benefits lost with the declines in the manufacturing and resource extractive industries in recent years.

Modelling of this type relates to one piece of the economic development puzzle. Other pieces include moving energy supplies to where they are needed in as efficient a manner as possible. Further, from a regional development potential point of view, it is not just the direct effects from the Project that are important. The indirect and induced effects generated as the economic impact moves through the region should not be overlooked.

This Analysis demonstrates that construction and operation of the Project will have tremendous economic benefits for Minnesota and for the Eight Counties where the Project will be constructed and operated. These important economic effects should be carefully considered by the MPUC as it evaluates the Application.

Appendix 1

Richard W. Lichty, Ph.D.
Professor Emeritus -- 2007

I. Educational Background

Kansas State University	Ph.D. Degree	1972
Graduate Major	Economics	
Supporting Field	Sociology	
Kansas State University	M.A. Degree	1966
Graduate Major	Economics	
Minor Field	Sociology	
Kansas State Teachers College	B.S.B. Degree	1965
Undergraduate Major	Business Administration	
Undergraduate Minors	Sociology, Economics	

II. Professional Experience

Research Director, UMD Bureau of Business and Economics Research	1993-2003
Morse-Alumni Distinguished Teaching Professor of Business and Economics University of Minnesota-Duluth	1996
Acting Director, Minnesota Council on Economic Education, Minneapolis	1990-1991
Director, Center for Economic Education University of Minnesota-Duluth	1977-1985
Faculty, University of Minnesota Duluth	1971 – 2007

III. Scholarly Research and Publications

A. Monographs

1. Jim Skurla with Richard Lichty "Economic Impact: Mesaba Metals Copper and Nickel Mining in Northeast Minnesota, Mesaba Metals, LLC,"
2. "Tax Revenue Impacts and Marketing Northern Minnesota's Iron Trail 2003," Richard Lichty with Jim Skurla; also with Jean Jacobson, Malita Barkataki, and Amber Paukner. May 2003
3. With Don McTavich, Matthew Porett, Jean Jacobson, "Northeast Minnesota Skills Assessment: Northeastern Minnesota Firm Survey II," UMD Bureau of Business and Economic Research Paper, 2000.

4. With Jean Jacobson and Arnela Smajlovic, "Impact Study: Duluth Botanical Gardens/Conservatory," UMD Bureau of Business and Economic Research, Working Paper #99-2, August 30, 1999.
5. 51 Other Publications of These Types

B. Published Books or Chapters in Books

1. "Establishing a Value for Water", "Applying the Concept of a Multiplier to a Regional Economy", and "Economics and the Environment, The Reserve Mining Case", in John P. Blair, Wayne D. Carroll, and Richard W. Lichty, Current Regional Issues: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin, The Dryden Press (New York 1994), pp 45-72.
2. Wilbur Maki and Richard Lichty, Urban Regional Economics: Concepts, Tools, Applications, 2000, (Ames) Iowa State University Press, ISBN 0813826799.

C. Journal Articles and Proceedings Publications

1. With Raymond Raab, "Identifying Subareas that Comprise a Greater Metropolitan Area: The Criterion of County Relative Efficiency", The Journal of Regional Science, Volume 42, Number 3, pp. 579 – 594, August 2002.
2. With Kjell Knudsen, "Underemployment in the Northeast Minnesota", The Arrowhead Journal of Business, Volume 2, March, 2001.
3. With Wayne Jesswein; Kjell Knudsen; and Donald McTavish, "Determining Demand for Skilled Workers in Northeast Minnesota", Economic Development Review, Volume 17, No. 3, Winter, 2001.
4. With Wayne Jesswein and Carolyn Zanko, "Regional Workforce Needs and Training: The Case of Northeast Minnesota/Northwest Wisconsin," Rural America, Volume 16, Issue 1, May 2001.
5. With Kjell Knudsen and Kathy Stewart, "Five Years of Public and Private Partnerships Conference Proceedings: A Typology, in Luiz Montanheiro and Margaret Linehan, (eds.) Public and Private Sector Partnerships: The Enabling Mix, (Proceedings of a Conference), Sheffield Hallam University Press, 2001.
6. With Kjell Knudsen, "Community Economic Development Strategic Planning: Growth and Development, a Case Study," in Luiz Montanheiro and Margaret Linehan, (eds.) Public and Private Sector Partnerships: The Enabling Mix, (Proceedings of a Conference), Sheffield Hallam University Press, 2000.
7. With Wayne Jesswein, "Technology, Labor Demand, and Workforce Development," The Arrowhead Journal of Business, University of Minnesota Duluth Center for Economic Development, Volume I, Number 1, December 1999, pp 43-47.
8. 34 Publications of These Types

D. Sponsored Projects

1. Consulting project with Eagle Products: "Economic Impact of Copper Mine on the Upper Peninsula, Michigan." January 2011. (\$5,000)
2. With Jim Skurla, et al., "Workforce Analysis for Northeast Minnesota", Minnesota Legislature and Center for Urban and Regional Studies. (\$27,000)
3. With Jim Skurla, et al., "Enterprise Network Systems Analysis for Duluth and Surrounding Region", Minnesota Department of Employment and Economic Development. (\$50,000)

4. With Jim Skurla, et al., "East Central Minnesota: Social and Economic Trends and Implications," with Jim Skurla and William Fleischman, (February 2004) (\$5,000)
5. Richard Lichty with Jim Skurla; also with Jean Jacobson, Malita Barkataki, and Amber Paukner. June 2003. (\$12,000)
6. "Tax Revenue Impacts and Marketing Northern Minnesota's Iron Trail 2003," Richard Lichty with Jim Skurla; also with Jean Jacobson, Malita Barkataki, and Amber Paukner. May 2003. (\$36,000)
7. "BWCAW Land Valuation Project 2003," Curt L. Anderson, Jim Skurla, and Richard Lichty, and; with research partners Minnesota Department of Natural Resources, University of Minnesota Natural Resources Research Institute, Ramsland & Vigen, Inc., and Tom Turner & Associates. (\$200,000)
8. 75 Grants of These Types

E. Papers at Professional Meetings

1. With A. Maureen O'Brien and Matthew Porett, "Assessing Workforce in Northeast Minnesota," 76th Annual Conference of the Western Economic Association International, San Francisco, CA, July 4-8, 2001.
2. With Kjell Knudsen, Key Note at opening plenary session, "Five Years of Public and Private Partnerships Conference Proceedings: A Typology," Public and Private Sector Partnerships: The Enterprise Governance, University of Twente, Enschede, Netherlands, June 6-9, 2001.
3. With Kjell Knudsen, "Signs Of and Implications From Underemployment in Northeast Minnesota," Business Forum, Duluth, Minnesota, November 28, 2000.
4. With Carolyn Zanko and Wayne Jesswein, "Regional Workforce Skills Assessment: The Case of Northeast Minnesota," Western Regional Science Association, Poipu, Hawaii, February 29, 2000.
5. 77 Papers of These Types

F. Offices Held

2013-Present	Co-Show Chair, American Toy Fox Terrier Club National Specialty, Las Vegas, NV, October 2013-20115
2012-Present	Board Vice-President, Lyric Opera of the North
2014-Present	Treasurer, Duluth Kennel Club
2004	President American Toy Fox Terrier Club
1999-2001	Local Arrangements Chair, Mid-Continent Regional Science Association meetings to be held in Duluth, June 2001.
1988-1993	Chair of the Nominating Committee, Mid-Continent Regional Science Association.
1988-1993	Program Chairman (5-year term), Mid-Continent Regional Science Association.
1986-1987	Member of the Board of Directors, Minnesota Economic Association
1985	Co-Chairman for Program of 17th Annual Meeting of the Mid-Continent Regional Science Association held in Duluth, Minnesota

- 1985-1987 University Education Association, Contract Administrator
- 1982-1984 President, University Education Association
- 1981-1982 President-Elect and member of Negotiating Team, University Education Association.
- 1977-1978 President, Mid-Continent Regional Science Association

G. Editorialships

- 1996-2000 Member of the Editorial Board, The Journal of Regional Analysis & Policy
- 1993-1996 Member of the Editorial Board, Regional Science Perspectives, Journal of the Mid Continent Regional Science Association.

IV. **Honors and Awards**

- 2005-2007 Awarded University Phased Retirement Plan
- 2001 Received national outstanding paper award, International Conference on Public Private Partnerships
- 2001 Received Distinguished Service Plaque, Mid-Continent Regional Science Association
- 1999 Principal Investigator for Skills Assessment Project. Project received a Certificate of Commendation from Governor Arne Carlson
- 1999 Admitted to the University of Minnesota Academy of Distinguished Teachers
- 1996 Given the title, "Morse-Alumni Distinguished Teaching Professor of Business and Economics," University of Minnesota
- 1991 Winner of the University of Minnesota Morse-Alumni Award for Outstanding Contributions to Undergraduate Education.
- 1990 Received International Paper Company National Award for Innovative Teaching in Economics.
- 1985 Plaque of Appreciation for the Minnesota Council on Economic Education for six years' service to the Minnesota Economic Education Program. Plaque presented at the MCEE Board of Directors Meeting, October 24, 1985.
- 1987 Plaque of Distinguished Service to the Board of Directors of the Minnesota Education Association.
- 1987 Received International Paper Company National Award for Innovative Teaching in Economics.

Appendix 2

JAMES A. SKURLA, Retired Director, UMD Bureau of Business and Economic Research

EDUCATION:

- Bachelor of Arts (cum laude), Economics, University of Minnesota, Duluth, 1975
- Master of Arts, Economics, University of Wisconsin, Milwaukee, Concentration: Econometrics (Statistics), 1977
- Certification: Leadership Duluth Program – Duluth Chamber of Commerce, May 1995
- Certified Economic Development Finance Professional - The National Development Council, May 1992

POSITIONS HELD:

- Director, Bureau of Business and Economic Research, Labovitz School of Business and Economics, University of Minnesota Duluth, 2009-June 2014. Retired.
- Acting Director, Bureau of Business and Economic Research, Labovitz School of Business and Economics, University of Minnesota Duluth, 2003-2009
- Business Development Specialist, Natural Resources Research Institute Business Group, Center for Economic Development, University of Minnesota, Duluth, 1987-2004
- Adjunct Instructor, Management Department, College of St. Scholastica, Duluth, Minnesota, Winter 1990
- Assistant Director, Bureau of Business and Economic Research, University of Minnesota-Duluth Nov. 1983-Dec. 1986
- Instructor, Department of Economics, University of Minnesota-Duluth, 1977-1983
- Supervisor and Researcher, Bureau of Business and Economic Research, University of Minnesota-Duluth, Summer 1981
- Market Researcher, Jenos, Inc., Duluth, Minnesota, Summer 1980
- Teaching Assistant, Department of Economics, University of Wisconsin-Milwaukee, 1976-1977
- Research Assistant, Department of Economics, University of Minnesota-Duluth, 1973-1975

TEACHING EXPERIENCE:

- Principles of Economics: Macro; Principles of Economics: Micro; Statistical Methods; Introduction to Economics
- Areas of Concentration: Econometrics, Urban Economics, Public Finance

PROFESSIONAL MEMBERSHIPS:

- Association for University Business and Economic Research
- Product Development Management Association
- Omicron Delta Epsilon

RECENT SELECTED PUBLICATIONS:

- Skurla, James, et al., 2014. Regional Economic Indicators Forum (REIF), March 2014 Proceedings.
- Skurla, James, et al., 2014. Eat Downtown Duluth Restaurant Week Economic Impact on Sales, for the Duluth Greater Downtown Council
- Skurla, James, et al., 2013. Northeast Minnesota Forestry Analysis 2013 for Iron Range Resources and Rehabilitation Board and the Minnesota Forest Resource Council.
- Skurla, James, et al., 2013. Economic Assessment of Climate Change on Northern Wisconsin. Partnered with Dovetail Partners.
- Skurla, James, et al., 2013. Great River Energy Economic Impact, 2013 for Great River Energy Cooperative.
- Skurla, James, et al., 2013. Economic Impact of the NorthMet Project on the State of Minnesota for PolyMet Mining.
- Skurla, James, et al., 2013. The Economic Impact of Laskin and Taconite Harbor Energy Centers, 2013 for Allele, Inc.
- Skurla, James, et al., 2012. The Economic Impact of Ferrous and Non-Ferrous Mining on the State of Minnesota, and on the Arrowhead Region and Douglas County, WI.
- Skurla, James, et al., 2012. Economic Impact of a Minnesota Power Transmission Line.
- Skurla, James, et al., 2012. Economic Impact of Giants Ridge on St. Louis County.
- Skurla, James, et al., 2012. The Economic Impact of Biofuels Production in Northeast Minnesota
- Skurla, James, et al., 2010. Tettegouche State Park Outpost Learning Center Feasibility Study, with University of Minnesota Duluth Department of Health, Physical Education and Recreation, Minnesota Department of Natural Resources.
- Skurla, James, et al., 2010. Library Return on Investment (ROI) and Minnesota State Library System Impact Study, State Library Services for the MN Department of Education.
- Skurla, James, et al., 2011. Northern Minnesota Forestry Analysis, for the Minnesota Forest Resources Council.
- Skurla, James, et al., 2010. Silver Bay, Minnesota: Eco-Industrial Opportunities. Michael Mageau and Jim Skurla, for the Minnesota Pollution Control Agency.
- Skurla, James, et al., 2010. The Regional Economic Impact of the University of Minnesota Duluth, for the UMD Chancellor's Office.
- Skurla, James, et al., 2010. Economic Impact of the Great Lakes and St. Lawrence Seaway System (GLSLS), Phase II. David Doorn, Peter Lindquist, and Jim Skurla, for the Great Lakes Maritime Research Institute.
- Skurla, James, et al., 2010. Modal Comparisons of Marine Freight Diversions: The Case of Coal Movements from a Soo Lock Closure, Christopher McIntosh and Curt Anderson, for the Great Lakes Maritime Research Institute.
- Skurla, James, et al., 2010. Modeled Prospective Regional Socio-Economic Impacts of the Back Forty Project, Menominee County, Michigan, for Aquila Resources Inc. and HudBay Mineral.
- Skurla, James, et al., 2010. The Economic Impact of Constructing Five Electric Power Lines in Minnesota, North

- Dakota, South Dakota and Wisconsin, 2010-2015, for CapX2020, Central Minnesota Municipal Power Agency,
- Dairyland Power Cooperative, Great River Energy, Minnesota Power, Minnkota Power Cooperative, Missouri River Energy Services, Otter Tail Power Company, Rochester Public Utilities, Southern Minnesota Municipal Power Agency, WPPI Energy, Xcel Energy.
- Skurla, James, et al., 2010. Erie Pier Re-Use Facility Phase II: An Optimized Cost-Effective Strategy for Increased Transport and Handling of Dredged Materials, for the Great Lakes Maritime Research Institute, with Hongyi Chen.
- Skurla, James, et al., 2009. Analyzing Alternatives to the Harbor Maintenance Tax, with McIntosh and Skalberg, support provided by the University of Minnesota Office of the Vice President for Research, 2009.
- Skurla, James, et al., 2010. The Economic Impact of Minnesota's Forestry-Related Industries on the State of Minnesota, for Division of Forestry, MN DNR.
- Skurla, James, et al., 2010. The Economic Structure of the Northland Works Region, 2009, for Northland Regional Economic Development Strategy Leadership Steering Committee, U.S. Department of Labor Regional Innovation Grant (RIG).
- Skurla, James, et al., 2010. Business Feasibility and Planning, Olcott Park Greenhouse, Virginia, Minnesota, with the Center for Sustainable Building Research at the University of Minnesota, for the Northeast Minnesota Regional Sustainable Development Partnership and the City of Virginia, MN,
- Skurla, James, et al., 2010. Cook County Local Energy Project (CCLEP), for the Northeast Minnesota Regional Sustainable Development Partnership, 2010.
- Skurla, James, et al., 2010. Economic Impact of Increased Local Food Production: Three Scenarios for Fourteen Counties of Minnesota and Wisconsin, for Healthy Foods, Healthy Lives Institute, Dept. of Food Science and Nutrition, University of Minnesota Healthy Food Lives Institute.
- Skurla, James, et al., 2010. Economic Impact of Lessard-Sams Outdoor Heritage Council Project Funding in Minnesota, 2011–2013, for Heather E. Koop, Lessard-Sams Outdoor Heritage Council, 2010.
- Skurla, James, et al., 2010. Minnesota State Library System Impact, for James V. Wroblewski, State Library Services, MN Department of Education, 2010.
- Skurla, James, et al., 2010. NE MN Wind Study: Part II, Community-Scale Wind Development in NE MN: Searching for the Best Methods, with Michael Mageau, Center for Sustainable Community Development, UMD Geography 2010.
- Skurla, James, et al., 2010. Silver Bay, MN Eco-Industrial Opportunities: Review of Ownership Structures, with Michael Mageau, Center for Sustainable Community Development, UMD Geography, for Minnesota Pollution Control Agency, and the City of Silver Bay, 2010.

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