

FISCAL NOTE
Requested by Legislative Council
01/16/2017

Bill/Resolution No.: HB 1349

- 1 A. **State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2015-2017 Biennium		2017-2019 Biennium		2019-2021 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues						
Expenditures						
Appropriations						

- 1 B. **County, city, school district and township fiscal effect:** *Identify the fiscal effect on the appropriate political subdivision.*

	2015-2017 Biennium	2017-2019 Biennium	2019-2021 Biennium
Counties			
Cities			
School Districts			
Townships			

- 2 A. **Bill and fiscal impact summary:** *Provide a brief summary of the measure, including description of the provisions having fiscal impact (limited to 300 characters).*

HB 1349 creates a new income tax deduction for individuals and corporations.

- B. **Fiscal impact sections:** *Identify and provide a brief description of the sections of the measure which have fiscal impact. Include any assumptions and comments relevant to the analysis.*

HB 1349 creates an income tax deduction equal to the amount of depreciation on equipment used for pipeline leak protection, monitoring, and detection, as calculated under the modified accelerated cost recovery system. The modified accelerated cost recovery system is the name of the current depreciation system under federal income tax law. As written it is understood that the amount of this deduction would be equal to the amount of depreciation claimed on the taxpayer's federal income tax return, effectively allowing a double deduction of the same amount. In addition the deduction would be allowed regardless of the location of the equipment inside or outside North Dakota.

3. **State fiscal effect detail:** *For information shown under state fiscal effect in 1A, please:*

- A. **Revenues:** *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

If enacted, HB 1349 may reduce state general fund revenues in the 2017-19 biennium. The amount of the reduction, if any, cannot be determined.

- B. **Expenditures:** *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

- C. **Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, for each agency and fund affected. Explain the relationship between the amounts shown for expenditures and appropriations. Indicate whether the appropriation or a part of the appropriation is included in the executive budget or relates to a continuing appropriation.*

Name: Kathryn L. Strombeck

Agency: Office of Tax Commissioner

Telephone: 701.328.3402

Date Prepared: 01/20/2017

2017 HOUSE FINANCE AND TAXATION

HB 1349

2017 HOUSE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Fort Totten Room, State Capitol

HB 1349
1/23/2017
27206

- Subcommittee
 Conference Committee

Committee Clerk Signature

Mary Brucher

Explanation or reason for introduction of bill/resolution:

A bill relating to a deduction for pipeline leak detection equipment depreciation expenses.

Minutes:

Attachment 1

Chairman Headland: Opened hearing on HB 1349.

Representative Dick Anderson: Introduced bill. Distributed written testimony. See attachment #1. This bill will provide some incentive for pipeline companies to install leak detection systems on existing and new pipeline. After the 2015 session we had HB1358 and the Energy and Environmental Research Center did a study on leak detection systems. We heard their study report a few weeks ago. They won't prevent leaks but they will catch leaks earlier and it will much less costly to clean the up the leaks.

Chairman Headland: Has there been a pipeline put in the ground without leak detection equipment on it in the past two years?

Representative Dick Anderson: The majority of the oil pipelines probably have leak detection systems on. I'm not sure if the produced water pipelines have a leak detection system on. The big problem isn't with oil; the problem we have is with salt water.

Chairman Headland: Are there any questions? We'll take support for HB 1349.

Ron Ness, President of North Dakota Petroleum Council: We are in support for what Representative Anderson wants to do. The bill probably doesn't get to what he wants to achieve. Pipelines generally have a primary monitoring system. You're trying to add multiple levels like the tachometer when your speedometer doesn't seem to work and you have a multiple back check. We will continue to look for some better solutions. The sponsor has the right intentions and we support his concepts.

Chairman Headland: Are there questions for Mr. Ness?

Representative Steiner: Is there technology for salt water detection?

Ron Ness: There are technologies, they are just not quite there yet in order to have that threshold. The technologies you have add substantial costs and as soon as you add these costs to a gathering system the operators will go back to trucks. There's a fine line. You have vastly more pipelines. We've shifted a huge amount of the barrels to pipes which has reduced trucks, saved lives, reduced dust, etc. There will be more spills because we are moving over three million barrels of liquids a day but we've taken them off trucks. We have to develop that technology and get the costs down on a salt water gathering system so you don't run yourself out of the economic model. We still have a lot to learn. The study done indicates there is no silver bullet; it's a system of a lot of things like construction, installation, multiple monitoring, etc.

Chairman Headland: Is there further testimony in support? Is there any opposition? Are there any questions for the tax department? Seeing none we will close the hearing.

Chairman Headland: Opened up for discussion. After hearing that there really isn't some quality technology available for salt water test lines which is an area this bill is trying to get to, and testimony from Mr. Ness indicated that it's not a game changer for them in any way, the bill probably deserves to go away.

Representative Howe: Ron Ness also indicated that companies would do this on their own even without an incentive. **MADE A MOTION FOR A DO NOT PASS.**

Representative Hogan: SECONDED

Chairman Headland: Is there any discussion?

Representative Steiner: Could we ask there be a study on remediation of salt water spills out of this bill since it's closely related? That detection system still isn't known and I think the issue should still be looked at.

Representative Ertelt: They talked about the bill being an incentive. When you're penalized for the spill I think that acts as an incentive. I don't know if these spills of salt water are treated the same as spills of oil on a relative scale of fines that are assessed.

Chairman Headland: I think they're looked at pretty hard. They have to be cleaned up; there is no question about that.

Representative Hatlestad: It would seem to me that the cost of clean-up would be more than a strong motivator for the company to do this without us paying the bill.

Chairman Headland: Any other comments?

ROLL CALL VOTE: 9 YES 3 NO 2 ABSENT

MOTION CARRIED

Representative Howe will carry the bill.

Date: 1-23-17
 Roll Call Vote #: 1

**2017 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 1349**

House Finance and Taxation Committee

Subcommittee

Amendment LC# or Description: _____

- Recommendation: Adopt Amendment
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar
 Other Actions: Reconsider _____

Motion Made By Rep. Howe Seconded By Rep. Hogan

Representatives	Yes	No	Representatives	Yes	No
Chairman Headland	✓		Representative Hogan	✓	
Vice Chairman Dockter	✓		Representative Mitskog		✓
Representative Ertelt	✓				
Representative Grueneich	AB				
Representative Hatlestad	✓				
Representative Howe	✓				
Representative Koppelman	✓				
Representative Olson		✓			
Representative Schobinger	AB	✓			
Representative Steiner	✓	✓			
Representative Toman	✓				
Representative Trottier	✓				

Total (Yes) 9 No 3

Absent 2

Floor Assignment Rep. Howe

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

HB 1349: Finance and Taxation Committee (Rep. Headland, Chairman) recommends **DO NOT PASS** (9 YEAS, 3 NAYS, 2 ABSENT AND NOT VOTING). HB 1349 was placed on the Eleventh order on the calendar.

2017 TESTIMONY

HB 1349

accurately unless a controlled experiment with controlled test conditions is executed. This was not achievable within the scope, budget, and schedule prescribed to this project.

The results inform the reader on a possible range of system performance to calibrate expectations. These results cannot be directly extrapolated to other pipeline systems because myriad design/operational/environmental factors would significantly impact performance results. Similarly, costs to apply any particular LDS to various gathering systems vary widely because of many of these same factors.

Conclusions

This state-funded field evaluation resulted in real-world testing of LDS on three companies' gathering pipelines. This testing provided each gathering pipeline operator with valuable information that led to actual improvements to their LDS—improvements made after testing to improve sensitivity, add functionality, or reduce time to alarm in the event of a leak. The execution of this project directly contributed to improved leak detection functionality for multiple gathering pipeline systems operated by the three partner companies, reducing spill risk.

Basic performance results of each LDS tested are summarized in Table ES-2.

Table ES-2. Summary of Test Results

Participating Company	LDS Characterization	Leak Rate, bbl/hr	Volume Withdrawn at Time of Alarm, bbl	Time to Detect, hr
Company A	Volume balancing and pressure rate of change monitoring	5.5–5.6	13.8–16.2	2.8–2.9
Company B1	Volume balancing over multiple moving time windows	21.2–49.9	11.6–121.3	0.29–5.71
Company B2	Statistical evaluation of flow balance and pressures with learning components	20.8–50.0	16.3–89.1	0.43–1.78
Company C1	Instantaneous flow balancing	8.4–14.0	0.1–0.94	0.07–0.96
Company C2	Annular space pressure measurement		No data	

Note: Differences in test conditions preclude direct comparison of performance.

Findings from the previously completed study and results from this field evaluation agree and indicate that adding some form of leak detection technology to pipelines increases the likelihood that a leak will be identified sooner, that leak magnitude will be reduced (relative to simple daily volume accounting), and that a leak will be located (if CPM is employed). Indeed, accurate location will reduce the response time and mitigate the environmental impact. An investment in LDS can be justified when compared to the cost of remediation of large spills. However, LDS technologies vary widely in complexity, cost, and effectiveness. There is no

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From: Helms, Lynn D. lhelms@nd.gov
Subject: FW: pipeline spill clean-up costs,
Date: Jan 14, 2017, 11:47:48 AM
To: Anderson, Dick D. dickanderson@nd.gov

Non-attributed pipeline spill clean up costs for 10 recent spills are compiled below as you requested.

Produced water costs ranged from \$800 to \$4,000 per barrel with an average of \$1,564 per barrel.

One crude oil spill cost \$984 per barrel.

Best wishes,
Lynn

From: Vanderbusch, Cody W.
Sent: Thursday, January 12, 2017 1:08 PM
To: Ritter, Alison M.; Helms, Lynn D.
Subject: pipeline spill clean-up costs,

Fluid Released	Approximate Quantity (bbls)	Remedial Approach	Approximate Cost
Produced Water	2	Dig & Haul	\$ 8,000.00
Produced Water and Crude Oil	7	Dig & Haul	\$ 10,000.00
Produced Water	10	In-Situ	\$ 16,000.00
Produced Water	20	Dig & Haul	\$ 26,000.00
Produced Water	30	Dig & Haul and in-situ treatment of deeper impacts	\$ 24,000.00
Produced Water	50	Dig & Haul and in-situ treatment of deeper impacts	\$ 45,000.00
Produced Water	50	Dig & Haul	\$ 61,000.00
Produced Water	115	Dig & Haul	\$ 145,000.00
Crude Oil	Unknown, assumed >100	Dig & Haul	\$ 350,000.00
Crude Oil	430	Dig & Haul	\$ 423,000.00

The existence of pipeline slack in unpressurized gathering pipeline systems allows large amounts of fluid to be pumped into the pipeline, filling void volume, before flow increases out of the system. This condition can lead to slower response time in identifying a leak. Further, the amount of slack within the pipeline changes with time and operating conditions, creating a very dynamic condition that is hard to predict.

Cost-Benefit Analysis

Acknowledging the limitations of data collected from this field evaluation's relatively small set of pipeline conditions and LDS, the results provide some insight into the benefits that could be achieved by implementing SCADA-based or CPM-based technologies.

The addition of SCADA to a pressurized gathering pipeline system resulted in a 77%–99% reduction in total spill volume (depending upon how the data were averaged) when compared against manual logging and a time to detect of less than 3 hours. On unpressurized pipelines, the addition of SCADA resulted in a spill volume reduction of 87%–93% compared to daily volume accounting and a time to detect of less than 6 hours.

Using a simplified model pipeline system, defined for this analysis as a six-inlet gathering system with 10 miles of buried pipe, the addition of SCADA-based leak detection could cost as little as \$100,000 (not including system development labor and management costs, which are likely significant but could not be ascertained from information provided by field evaluation partners) if communication costs are kept to a minimum and if existing instrumentation and process controls are SCADA-capable. This cost can climb to several million dollars if a more robust fiber-optic communication network is needed and installed as a retrofit to an existing pipeline system.

The use of CPM LDS requires an incremental addition of computer hardware and software on top of the entire infrastructure required for a SCADA-based LDS. Field evaluation results suggest that the addition of CPM to an unpressurized gathering system could provide a 96% reduction in total spill volume when compared to daily flow accounting and would reduce the time to detect to less than 2 hours. This improvement over SCADA would require an incremental cost of \$50,000–\$100,000 above the cost of SCADA, not including internal development labor costs, which are significant and difficult to accurately predict.

These costs are based on a relatively small model gathering system and are system-specific. Actual costs can vary significantly because of topography, miles of pipeline, and number of wellsites. Costs have been included here to provide an order-of-magnitude estimate for comparison with observed LDS performance.

An Important Note on Limitations of This Field Evaluation

Within this report, the authors provide observations of performance of several LDS on several unique gathering pipeline system configurations. The reader must avoid the temptation to directly compare performance of one LDS to another. This study does not, in any way, intend to directly compare performance of LDS. In fact, such comparisons are inappropriate to make

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HB 1349 is a bill that would provide an incentive for energy companies to install leak detection equipment on new and existing pipelines. The intent of the bill is to provide a company to use a modified accelerated cost recovery system depreciation method to encourage them to install leak detection systems. In the last session the legislature passed HB1358. The purpose of this legislation was to address public concern over what was perceived as a growing problem with oil and produced water spills in the state as a result of increased exploration and productivity activity in the oil industry. The bill sought to direct state funding for cleanup efforts and research efforts intended to minimize the number of spills and a volume of fluid spilled. Specifically section 8 of the bill directed the EERC to analyze the existing regulations under construction in the monitoring of crude oil and produced water pipelines ,determine the feasibility and a cost-effectiveness of requiring leak detection and monitoring technology on new and existing pipeline systems and provide a report with recommendations. After hearing the report in our committee at the beginning of the session I thought this bill would be a good way to hopefully provide an incentive for leak detection systems to be used. The report that the EERC presented was "LIQUIDS GATHERING PIPELINES" A Comprehensive Analysis. I have enclosed some data for you that shows leak detection systems will limit the size and reduce the cost of cleanup but will not prevent leaks.