Oilsands Performance Metrics
Summary Report

Audiences and Design Principles

July 2011

Oilsands Metrics
THOUGHT LEADER FORUM

Oilsands Metrics Thought Leader Forum Summary Report: Audiences and Design Principles

July 2011

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Executive summary

On May 3, 2011, the Pembina Institute, the Institute for Sustainable Energy, Environment and Economy and Deloitte hosted a Thought Leader Forum on oilsands performance metrics. Almost 60 participants, representing government, industry, academia, non-governmental organizations and a number of other groups, discussed two main topics:

Audience for Metrics: Who are the various audiences for oilsands performance metrics? How will different audiences use the metrics?

Principles for Metrics: What guiding principles should metric developers use? How would we recognize if those principles were being met?

This report summarizes the results of the forum discussion.

Audiences for metrics

A successful metrics system for the oilsands will:
- cover environmental, social and economic aspects;
- allow for benchmarking across companies, projects or regions;
- allow companies to be held accountable to compliance and performance targets; and
- allow for the evaluation of a company's social license to operate.

To achieve success, metrics designers must understand and respond to the needs of the eleven primary audiences identified in the forum. The eleven audiences, in no particular order, are as follows:

- Oilsands industry
- Other industry (suppliers, 'competing' industries)
- Governments (federal, provincial, territorial and aboriginal)
- Financial community
- International and foreign governments
- Academia
- Aboriginal communities
- Local communities
- Non-governmental organizations and foundations
- Consumers and the general public
- Media

Design principles for metrics

Embedding a number of key principles into the design of a system will improve the support and acceptance of the performance metrics by all audiences. During the forum, participants were tasked with collectively determining what these primary principles are and what they mean for an oilsands metrics system. Through discussion and debate, delegates identified their fundamental principles. Forum organizers, incorporating conversation from the forum, information in feedback forms and each individual's top 5 principles, then developed the three principles in Table 1. These three principles represent the forum organizers best attempt at defining three widely supported principles. However, they were not voted on by forum participants.

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Table 1: Summary of primary design principles

Principle	Definition	Elements of successful Implementation
Relevant	Meaningful to the intended audience	• Widely used • Drives performance • Developed with stakeholders
Accurate	Precise, repeatable, scientifically and statistically valid.	• Withstands rigorous audits and reviews • Adapts to changing needs and scientific understanding • Has a process for addressing qualitative information
Credible	Open to public scrutiny, transparent and independent	• Trusted by stakeholders • Information widely available • Free from perceptions of bias

Next steps

Designing an effective system for performance metrics requires time and commitment from all stakeholders. At the forum, many participants were keen to push forward to the next steps of creating the metrics themselves. We believe, however, the foundational groundwork should be completed first to ensure any metrics system encompasses a complete sense of the audience and guiding principles. Without these, time and resources may be wasted.

We are advancing the discussion at the forum by leading the following:

Providing Information

- **Summary report:** The summary report will be posted to the website and distributed to all forum invitees (> 300 people) and posted to the forums public website. It will be available in July.
- **Forum interviews:** The forum organizers interviewed eight forum participants: Clive Mather, Jamie Bonham, Barry Worbets, Jennifer Grant, Peter MacConnachie, Brad Stelfox, Chris Powter and Kim Sturgess. These interviews will be posted on the forum website in late May. All forum invitees will be notified when they are posted.

Engaging a broader audience

- **Webinars:** The forum organizers hosted a series of webinars in early June to share the results of the forum and seek feedback from those groups that were under-represented at the forum including, but not limited to, aboriginal communities, non-governmental organizations, the federal government and the social and economic communities. Specific feedback from these webinars can be found in Appendix C.
- **Follow-up conversations:** The forum organizers are actively pursuing conversations with the Government of Alberta, OSLI, CAPP and oilsands companies interested in oilsands performance metrics. The goal of these conversations is to ensure those developing metrics use the information from the forum and, to the extent possible, support the development of oilsands performance metrics.

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Forum organizers' recommendations

The enormous potential of oilsands performance metrics can only be achieved if the metrics are perceived as relevant, accurate and credible, and if they are used by the full range of audiences. Developing and implementing successful metrics requires both scientific rigour and inclusive stakeholder engagement. In addition, an incredible amount of work on oilsands metrics has already been completed by groups such as the Alberta Government, oilsands companies and the Canadian Association of Petroleum Producers and internationally by groups like the Global Reporting Initiative. The forum organizers are not advocating for new metrics processes. The checklist can be used on any existing, combination of metrics processes or contemplated metrics processes. We encourage metric developers to use this checklist for their own development process or processes.

Table 2: Checklist of conditions for success for metrics development and reporting

Consider Audiences
❍ Can audiences use the metrics to benchmark between company and project performance and between different oil sources?
❍ Can audiences use the metrics to assess and communicate compliance/performance and hold companies and governments accountable to commitments?
❍ Can audiences use the metrics to establish, sustain and evaluate a company or project's social license to operate?
❍ Do the metrics cover economic, social and environmental metrics?
Consider Principles – Relevant, Accurate and Credible
❍ Are or were the metrics developed using a set of well-defined guiding principles?
Relevant
❍ Are the metrics relevant?
❍ What stakeholder engagement process will be used during metric selection and design as well as during long-term management of the metrics system?
❍ Are the metrics aligned with local, regional, provincial and federal issues/objectives and goals?
❍ Are the metrics comparable between companies and across sectors?
❍ Is there a process for reviewing and modifying metrics in line with evolving expectations of what is "relevant"?
Accurate
❍ Are the metrics accurate?
❍ Are the metrics audited? By whom and how often?
❍ Is there a process for determining scientific and statistical validity?
❍ Is there a process for incorporating qualitative information?
Credible
❍ Are the metrics credible?
❍ Are the metrics and their development process transparent to the extent possible?
❍ Is the compiler and host of the metrics trustworthy?

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Introduction

On May 3, 2011, the Pembina Institute, the Institute for Sustainable Energy, Environment and Economy and Deloitte hosted a Thought Leader Forum on oilsands performance metrics. Almost 60 participants, representing government, industry, academia, non-governmental organizations and a number of other groups, discussed two main topics:

Audience for Metrics: Who are the various audiences for oilsands performance metrics? How will different audiences use the metrics?

Principles for Metrics: What guiding principles should metric developers use? How would we recognize if those principles were being met?

> ### Performance metric definition
>
> For the purposes of this forum a performance metric is any quantitative **environmental, social** or **economic** information that can be measured, reported and tracked over time. It could include raw data like total water use, or some form of modified data like life cycle greenhouse gas emissions. We'll consistently use the term performance metric; however our definition also encompasses indicators, sustainability reporting, triple-bottom-line reporting, integrated reporting or oilsands reporting in general.

This report summarizes the results of the forum discussion and has three objectives:

- Report results of the forum discussions to forum attendants
- Provide a meaningful summary of forum results that both attendants and non-attendants can use to understand, develop or critique metrics systems
- Outline clear next steps that will expand on the progress made at forum

Why a Thought Leader Forum on oilsands metrics?

The majority of oilsands stakeholders want a system for measuring and reporting on performance — environmental, social, and economic — for the oilsands sector and region. The Royal Society of Canada, the Federal Oil Sands Advisory panel, the Government of Alberta, the Pembina Institute, North West Ethical Investments, and many oilsands companies are just some of the organizations that recommend the development of publicly accessible metrics on oilsands performance.[2] In response, several organizations, such as the Canadian Association of Petroleum Producers (CAPP), the Oil Sands Sustainable Development Secretariat and Alberta Environment, are developing or have developed oilsands performance metrics. The Government of Alberta's environmental monitoring panel is currently developing recommendations on how to develop and implement a world-class monitoring, evaluation and reporting system within the province, which it will provide to Alberta's Minister of Environment.

Performance metrics can be powerful tools for identifying issues and solutions, demonstrating and communicating performance and building trust among stakeholders; however, these benefits are only realized when performance metrics are designed to meet as much as possible the broad range of needs and expectations of the different

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audiences. With the range of initiatives underway and broad interest in them, there is critical need to ensure we have a cross-sectoral understanding of why different stakeholders are interested in oilsands performance metrics and the various expectations, in terms of principles like engagement and transparency, for these metrics.

It should be noted that the purpose of the forum was not to identify specific metrics, such as emissions per unit of production; instead, it sought to lay the foundations for multi-stakeholder consensus-building around what the process should be for identifying and communicating such metrics.

Forum Objective

To increase awareness and understanding of stakeholder opinions and expectations on oilsands performance metrics to support existing or emerging monitoring and measurement systems.

What do we mean by oilsands?

For the purposes of our discussion, we are looking at the full fuel cycle of oilsands from an economic, environmental, and social perspective. This includes production (mining and in situ), transportation (pipelines), upgrading, construction, and use of oilsands-derived fuels.

The oilsands region includes the Athabasca, Cold Lake, Peace River and upgrading areas in Alberta.

The use of performance metrics likely extends beyond the region given the role of oilsands in the national and global economy.

Description of forum

Developing the Thought Leader Forum

A collaboration of organizations have designed and sponsored the Thought Leader Forum. The Pembina Institute, the Institute for Sustainable Energy, Environment and Economy out of the University of Calgary (ISEEE) and Deloitte executed the design and event planning and hosted the event. The Government of Alberta, Suncor and Cenovus funded the development and hosting costs. All of the organizations listed above, along with CAPP, sat on the steering committee for the etvent. The steering committee provided guidance on the agenda, invitation list and the forum pre-read.

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Forum details, process and anticipated outcomes

The forum was a full-day event, held in the Rozsa Centre on the University of Calgary Campus on May 3, 2011. Representatives from industry, government (local and provincial), universities, non-governmental organizations and representatives from other groups attended and participated in the discussions. Participants received a short pre-read, available (see http://www.oilsandsmetrics.ca/OSMprereadapr26v2.pdf) in advance of the forum.

At the forum, as noted above, participants focused on two topics:

> **Audience for Metrics:** Who are the various audiences for oilsands performance metrics? How will different audiences use the metrics?

> **Principles for Metrics:** What guiding principles should metric developers use? How would we recognize if those principles were being met?

Forum participants discussed these topics in two discussion sessions, in small groups (seven per table), assisted by facilitators. After each session, the facilitators summarized their table's discussions, and these results were reviewed with all participants in an open dialogue.

The specific breakdown of attendees is outlined in Table 3 below.

Table 3: Breakdown of attendees

Attendee	Invited	Registered	Attended
Academic	19%	5%	2%
First Nations	4%	5%	2%
Government	13%	18%	23%
Industry	43%	48%	55%
Non-Governmental Organization (NGO)*	12%	14%	5%
Other	9%	10%	13%

* formerly Not-For-Profits

As can be observed, the forum had some limitations around diversity of participants. We sent invitations to nearly 300 individuals from a broad range of groups. Additionally, the initial registration showed a higher representation of academics, First Nations and NGOs, while the actual attendance numbers were lower. As well, the majority of participants came with an environmental expertise. As this discussion moves forward, we will seek input from a broader range of groups on this summary and through webinars.

The results from the forum — understanding of audience application and recommended design principles — will be posted publicly and made available to all interested parties. Ideally, those working to design and develop performance metrics will find the results useful and will incorporate them into their design and process. The intent of the forum was NOT to recommend or replace existing initiatives or to recommend specific metrics (e.g. water metrics, criteria air contaminants, etc).

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Background

Performance metrics are a key element of monitoring, evaluation and reporting systems. In many systems, performance metrics are an attempt to derive meaningful information from vast quantities of monitoring data. The specific metrics depend on what different audiences consider meaningful and could result from objectives, historical context or international benchmarks. For example, companies continuously collect financial data; however, this data is meaningless to many until it is converted to performance metrics like expenses, revenue, shareholder equity, and asset retirement as outlined in corporate financial statements. Industries, governments and non-governmental organizations around the world use performance metrics to identify environmental, social and economic issue areas; measure performance towards solving identified issues; communicate and build trust with stakeholders; and identify business opportunities. Organizations may apply performance metrics reporting guidelines voluntarily, as in the Carbon Disclosure Project or sustainability reports, or in response to mandatory requirements, such as the International Financial Reporting Standard and the National Pollutant Release Inventory. Many companies also use performance metrics internally, to benchmark between assets or business units or across peer groups.

> ## Design principle
>
> A principle is a law or rule that has to be, or usually is to be followed.
>
> The principles of a system are understood by its users as the essential characteristics of the system, or reflecting the system's designed purpose, and the effective operation or use of which would be impossible if any one of the principles was to be ignored.
>
> In our discussion, the design principles apply to both the development of metrics and the implementation and reporting of metrics.

Internationally, the Global Reporting Initiative (GRI) is the most well-known reporting framework that incorporates social, economic and environmental performance metrics. More than 1,000 companies use the GRI reporting framework worldwide.

Value of metrics

Most organizations operating in, regulating, critiquing or impacted by oilsands development agree with the concept of oilsands performance metrics. Metrics can help identify and manage environmental, social and economic issues, communicate the risks and benefits of oilsands development, demonstrate that performance aligns with desired outcomes and strengthen relationships with interested stakeholders. The Royal Society of Canada, the Canadian Association of Petroleum Producers, the federal Oil Sands Advisory panel, the Government of Alberta, the Pembina Institute, North West Ethical Investments, and many oilsands operators are just some of the organizations that recommend the development of public oilsands performance metrics.[6]

These organizations and others make this recommendation because performance metrics are an essential ingredient to improving oilsands performance. As many say, "you can't manage what you don't measure". Specifically they can assist in the following three areas:

Measurement and management: Performance metrics enable the oilsands industry, the Government of Alberta and the Government of Canada to identify areas for improvement, measure progress and evaluate performance in the context of desired outcomes. Identifying improvement areas also helps focus research efforts.

Communication: Performance metrics provide information for different sectors to discuss and engage on challenges and solutions.

Strengthen relationships: The process of developing, implementing and maintaining performance metrics can help build trust and understanding amongst oilsands stakeholders.

Suncor story

"Suncor uses the GRI framework to report on environmental, social and economic data for its oilsands operations. In 2009, we created a separate in-situ business and as a result we have disaggregated environmental and social data for both mining and in situ operations. The performance metrics give us a unique way to look for improvement opportunities in environmental, social and economic performance. In addition, we've used our performance indicators to engage in more meaningful conversations with our stakeholders, and establish the only public air, water and energy efficiency targets in the oilsands industry. It would have been impossible to establish these targets without performance metrics"

— Peter MacConnachie, senior sustainability issues management specialist, Suncor Energy Inc.

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Examples of existing initiatives

The Government of Alberta, several partnership organizations, oilsands companies and the Canadian Association of Petroleum Producers are reporting on oilsands performance metrics or reporting data that could be used for such metrics. Some of these sources are discussed briefly below.

Figure 1. Existing initiatives towards developing oilsands metrics and data collection

Government and partnership data collection		
	Who?	The Government of Alberta and several partnership organizations like the Regional Aquatics Monitoring Program, the Wood Buffalo Environmental Association, the Cumulative Effects Management Association, the Lower Athabasca Regional Plan and the Alberta Biodiversity Monitoring Institute.
	What?	A broad set of data including local , regional and provincial environmental, social and economic data.
	Stage?	Existing
	Where?	Information is stored by a number of different organizations and government departments

Company required reporting		
	Who?	The Government of Alberta requires oilsands companies to report on a wide range of environmental, social and economic data
	What?	Aggregated oilsands data for environmental and social metrics
	Stage?	Existing
	Where?	Information is stored by a number of different organizations and government departments

Company voluntary sustainability and financial reports		
	Who?	Oilsands companies report a range of information.
	What?	The type and quality of metrics varies by company. Some report on environmental, social and financial metrics.
	Stage?	Depends on the company, some report on a wide range of environmental, social and economic metrics.
	Where?	Company reports are available online; for example, Suncor's or Shell's reports.[3]

Responsible Canadian Energy: Oilsands Progress Report		
	Who?	The Canadian Association of Petroleum Producers
	What?	Aggregated oilsands data for environmental and social metrics
	Stage?	First report available publicly. CAPP intends to refine future reports based on stakeholder feedback.
	Where?	CAPPs website

Figure 1 provides a short list of initiatives in Alberta that collect data and/or report on oilsands performance metrics. More information is required on the existing initiatives at the Government of Canada, such as the federal monitoring panel. The breadth and depth of data these initiatives collect is vast and will not be discussed in more detail in this paper. For more information consult the websites of the organizations listed above.

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Emerging initiatives

In addition to existing initiatives, several other initiatives to develop oilsands performance metrics are emerging. A few of these initiatives are discussed briefly below.

Figure 2. Emerging initiatives towards developing oilsands metrics [4,5]

Oilsands Portal	**Who?**	Led by Alberta Environment
	What?	Publicly accessible one-stop shop for all reported environmental data. Focuses on cumulative effects on air, land, water, climate change and biodiversity.
	Stage?	Active construction, release expected in summer 2011
	Where?	Available online, website currently not public
Performance Measures	**Who?**	Oil Sands Sustainable Development Secretariat
	What?	The project includes measures to: optimize economic growth, reduce environmental footprint and increase quality of life
	Stage?	Currently in the performance measures refinement and data collection phases
	Where?	Performance measures will be incorporated into future *Responsible Actions: A Plan for Alberta's Oil Sands* Interim and Annual Progress Reports
Government of Alberta	**Who?**	The Government of Alberta requires oilsands companies to report on a wide range of environmental, social and economic data
	What?	Aggregated oilsands data for environmental and social metrics
	Stage?	Existing
	Where?	Information is stored by a number of different organizations and government departments
Provincial Environmental Monitoring Panel	**Who?**	The Government of Alberta
	What?	Expert panel to provide recommendations to the Minister of the Environment on the development of a provincial-scale world-class environmental monitoring, evaluation and reporting system
	Stage?	Panel will report back in June 2011
	Where?	Terms of reference available at http://environment.alberta.ca/03289.html

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Audiences: Understanding multiple uses of oilsands metrics

In general, all audiences are interested in improving environmental, social and economic performance in the oilsands. However, each audience has its unique interest areas and will use reported metrics for different purposes. For example, a public health NGO may be most concerned about regional health and potential health impacts from oilsands development, and may use regional reporting to focus its efforts. An oilsands company, while concerned about regional health impacts, would likely also be interested in understanding the contribution of its own operations to the impacts and in identifying mitigation options.

Forum participants were given the following list of eight potential audiences for oilsands metrics as a starting point for discussion:

- Oilsands industry,
- Governments (federal, provincial, territorial and aboriginal),
- Financial community
- International governments,
- Academia,
- Aboriginal communities,
- Affected landowners
- Non-governmental organizations and foundations.

Each audience was briefly described in the pre-read document provided to participants. These summaries were informed by initial stakeholder interviews conducted by Pembina as well as views of the forum steering committee. The list was intended as a preliminary audience list to be further developed and discussed at the forum. Forum participants added three audiences:

- Other industry (suppliers, 'competing' industries)
- Consumers/public
- Media

After a brief introduction by the lead facilitator to set up the topic, objectives and process, participants entered a breakout session on audiences. Tables of seven, each assisted by a trained facilitator, discussed each stakeholder group. Groups were asked to discuss the following two questions:

- Do the eight primary audiences cover the range of audiences for oilsands metrics?
- How will each audience utilize oilsands metrics – economic, environmental, social – in their respective work and roles?

While time did not permit each table to discuss every audience in detail, as a whole, all audience groups were covered thoroughly.

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Following these discussions, table facilitators met to discuss the ideas they heard from their groups. Summaries of key stakeholders and expected uses were compiled and formatted in a presentation. The presentation was then delivered to the forum participants in plenary. Using an electronic voting system, delegates were able to vote on each audience summary. Those who did not agree with the summaries were asked to speak and the concerns were recorded. The results of this process are discussed below.

Synthesis of plenary discussion

We found general consensus on the primary audiences for oilsands metrics and their expected uses of metrics; plenary discussion focused on:

- what additional audiences should be included and
- refining the definition of 'aboriginal communities' and 'not-for-profit organizations'.

For most of the audiences, approximately 95% participants accepted the summary of the discussions, with only 5% requesting changes. A portion of the plenary discussion focused on the 'aboriginal community' and 'not-for-profit' groups as there was less support for their summaries. Forum participants noted that 'aboriginal communities' should also include aboriginal governments, and, lacking a definition, 'not-for-profit organizations' should be retitled as non-governmental organizations (NGOs). Larger disagreements arose with the summaries for 'other industry', 'public/consumer' and 'media' groups. These discussions were carefully noted and the changes are reflected in Table 4. For detailed voting results, demonstrating support for each summary presented at the forum, please refer to Appendix A.

Audiences

Table 4 summarizes the forum participant's primary audience list and the uses for oilsands metrics by audience. The table is followed by the forum organizers' key conclusions from the discussion.

Table 4. Uses of performance metrics, by audience

Audience	How will they use metrics?
Oilsands industry	• Establish and sustain social license to operate. • Set goals and report on corporate / facility performance (e.g., progress, good practices through supply chain). • Support good practice through supply chain. • Inform strategy development. • Benchmark between companies / facilities, need for 'apple-to-apple' comparisons given diversity of operations, reservoirs and technology. • Attract and retain employees, partners, and investors. • Demonstrate compliance and performance. • Advance R&D / innovation priorities. • Support collaborative regional / issue specific initiatives.

Audience	How will they use metrics?
Other industry (suppliers, 'competing' industries)	• Inform business planning — implications to their business (e.g., scale, niche, opportunities, priorities). • Inform development of own metrics, regulation and management priorities / processes. • Opportunity identification, performance of new technologies. • Regional issues, manage on a fair basis. • Enable cross-industry comparison. • Downstream and supporting industries: reputation management associated with oilsands.
Governments (federal/provincial/ territorial/aboriginal)	• Determine best practices, performance standards and/or requirements. • Measure performance relative to regional plans. • Ensure regulatory compliance/accountability with respect to standards, thresholds and guidelines, including cumulative impacts. • Communicate cumulative performance and broader impacts (+/-) to public . • Inform public policy priorities (investment, regulatory) — economic, social and environmental. • Inform internal development needs (e.g., resources, infrastructure, people). • Support trans-boundary agreements. • Support access to markets for oilsands products. • Maintain jurisdictional authority.
Financial community	• Compare and influence performance of companies within and between sectors, enabling empirically-based decision-making. • Guide investment portfolios (e.g., social / environmental). • Assess investment / insurance risk. • Track long-term trends.
International/foreign governments	• Inform perspective (+/-) on Canada with respect to stewardship of oilsands resource, communities and environment. • Inform domestic policy and politics. • Inform trade policy and priorities (e.g., energy mix, green protectionism, with recognition of distinct relationship between Canada and the U.S.). • Benchmark own performance and that of other nations (e.g., life cycle performance). • Inform decisions on infrastructure investments and approvals. • Assess compliance with international agreements and own standards. • Assess value of resource in terms of security of supply.
Academia	• Inform research priorities (e.g., scientific, technical, social). • Conduct analysis (e.g., need raw data). • Inform curriculum and career planning / training priorities. • Be a trusted third-party evaluator and commentator. • Encourage and leverage funding for activities.

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Audience	How will they use metrics?
Aboriginal communities	• Assess and communicate impacts on traditional practices, land uses, treaty rights, local human health / well-being. • Guide local governance, economic development and infrastructure priorities and planning. • Ensure fair and equitable treatment. • Ensure agreements fulfilled. • Assess relative performance to inform decision-making (e.g., partners, priorities, etc). • Cumulative impact to inform economic benefit and impact agreements / decision-making. • Inform communities to ensure they have people in place to deliver. • Enhance quality of engagement around metric choice and results.
Local communities	• Assess impacts on basic human health. • Assess impacts (+/-) to quality of life, property values, cost of living, jobs, wages. • Inform individual / family choices. • Inform community planning (e.g., pace, demographics, priority infrastructure investments). • Leverage support for municipal investments. • Ensure companies follow through on commitments. • Differentiate between companies for purpose of driving performance. • Measure project or sector's social license to operate.
Non-governmental organizations/ foundations	• Hold companies and governments to account (watchdog role). • Inform public policy and corporate performance advocacy. • Promote, develop and drive adoption of leading regulatory and non-regulatory processes and / or performance standards (e.g., FSC, CSA, etc). • Mobilize broader consumer / societal behavioral change. • Secure financial support and target programs. • Promote, monitor or oppose through influencing of policy and key stakeholders.
Consumers/public	• Assess government and industry performance on addressing priority issues. • Inform individual choices (e.g., consumer, voting, employment). • Allow for "citizen-science" by supporting informed layperson analysis and decision-making. • Inform public with regards to the broader system and challenges.
Media	• Identify where there is an issue / problem / story. • Make comparisons in performance. • Provide accountability / act as watchdog. • Gauge, inform and influence public opinion. • Educate and provide basis for conversation.

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Conclusions of the forum organizers

While each audience has its unique interest areas and will use reported metrics for different purposes, a number of commonalities and overlapping interests can be drawn from the summaries above. The key conclusions are as follows:

- **Uses of metrics:** The attendants expect all audiences will use metrics in three distinct ways: benchmarking, assessing compliance/performance and accountability, and determining a company's social license to operate.
  - **Benchmarking:** Most audiences want to use metrics to benchmark company/project performance. Each audience may benchmark using different criteria, but it is essential that metrics allow for benchmarking.
  - **Assessing compliance/performance and accountability:** Most audiences also expect to use metrics to either demonstrate performance/compliance or to assess government and industry compliance/performance and hold them accountable.
  - **Determining social license to operate:** Many groups hope to use metrics to establish and sustain social license to operate or to evaluate a company or industry's social license to operate.
- **Scope — environmental, social and economic:** Most groups want to use metrics to assess or communicate responsible management of issues associated with health, wellbeing, economic development, quality of life and environment. Addressing all these interest areas will require coordination between groups (business units, government departments, diverse NGOs and community groups) that do not often collaborate.
- **Single audience uses:** Uses of metrics not shared by multiple audiences should not be ignored. For example, international or inter-governmental groups may use metrics for trans-boundary agreements.

In short, a successful metrics system for the oilsands will cover environmental, social and economic aspects; allow for benchmarking across companies, projects or regions; allow companies to be held accountable to compliance and performance targets, and allow the evaluation of a company's social license to operate.

Design principles

In the absence of generally accepted standards for measuring and reporting non-financial (i.e., environmental and social) performance,[8] those interested in developing and reporting non-financial performance are left to develop their own principles and guidelines. Those developing performance metrics for the oilsands must consider the full breadth of audiences and their expectations of performance metrics. Fortunately, several organizations including the GRI, CAPP, the Government of Alberta and the Oil Sands Research and Information Network have developed guiding principles for their respective initiatives. The purpose of this section of the pre-read and the discussion at the forum is to determine collectively what the primary principles are and what those principles mean. For example, it may be easy to agree to the principle of transparency but difficult to agree on what level of transparency is sufficient.

For this activity, forum participants were tasked to collectively determine what the primary principles are and what those principles mean for an oilsands metrics system. As a starting point, delegates were given a list of eleven principles. For the full principle list see the pre-read at http://www.oilsandsmetrics.ca/OSMprereadapr26v2.pdf.

After a brief introduction by the lead facilitator to set up the topic, objectives and process, participants entered a breakout session on design principles. Tables of seven, assisted by a trained facilitator, had the opportunity to discuss the principles. For each of the top principles, groups were asked to discuss the following:

- What does the principle mean?
- How would you recognize that the principle has been applied/implemented in an oilsands metrics system?

Facilitators then summarized the results of their discussion to develop the top five principles for the group as a whole. The lead facilitator then presented the five top principles, their definitions and what successful implementation looked like to the group. Using an electronic voting system, delegates were able to vote on each of the top five principles. Those that did not agree with the summary or the principle itself were asked to speak and the concerns were recorded and integrated into the results in this summary report. The results of this process are discussed below.

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Synthesis of plenary discussion

The objective of this discussion was to determine the principles for the design, selection and implementation of oilsands performance metrics that would meet the interests and uses of the audiences identified in Section 2. During the table and plenary discussion forum participants identified three main challenges:

1. **Scope:** Forum participants often considered different elements of a metrics system. Some focused on principles for the metrics themselves while others considered the metrics development system.

2. **Definition overlap:** Participants often agreed on overarching concepts, like relevancy, but had difficulty reaching agreement on the detailed definition of the concept.

3. **Outcomes vs. inputs:** Participants varied in terms of how they viewed the principles in terms of outcomes and inputs. For example, a credible system is an outcome of a number of inputs like stakeholder engagement and using an objective third party.

Forum participants in general agreed on three principles; however there was considerable discussion on what portion of a metrics system the principles applied to, and on the need for and content of a fourth and/or fifth principle.

At most table discussions, forum participants found it difficult to agree on five principles. Nevertheless, facilitators identified the five principles most agreed to at their table. A final list of five principles (relevant, accurate and credible, consistent, trustworthy and fair), synthesized from all the tables, was then presented to the group in plenary. During the plenary participants voted on each of the five principles. The plenary group debated on which principles were essential and how they would be applied. While there was a high level of support for principles such as 'relevant' and 'accurate', there was more debate around principles like 'fair' and 'trustworthy'. These discussions and comments were carefully noted and have been incorporated into Table 5 below.

A significant portion of the discussions, as well as feedback from the evaluation forms, signalled participants' concern that principles should be different for the design process compared to the actual metrics themselves. However, others noted that the same principles designed to develop metrics would apply to the on-going metric reporting and management process as well. The principles listed in the next section apply to the development of metrics as well as the implementation of a metrics reporting system.

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Three design principles

Table 5 summarizes the top three design principles derived through reviewing facilitator notes, delegate comments during and in the feedback forms and from the top five principle sheets that each delegate filled out at the end of the session.

Table 5. Top three design principles for metric development and reporting

Principle	Action-based principle definition	What does successful implementation look like
Relevant	• Engage stakeholders in design and verification, and tailor system to their needs. • Answer questions they are asking/supports decision-making • Link to issues/challenges and objective/goal/outcome of concerned audiences • Understandable to the variety of audiences in language, format and delivery • Address a hypothesis and show causality • Make comparable, over time and between companies and across a region/cumulative, and with non-oilsands. • Ensure timeliness. • Make consistent and repeatable over a long period of time between companies and sectors, yet flexible to reflect changing science, technology and practice.	• Actual and actionable improvement • Useful across sectors (gov't, stakeholders, industry) and offers appropriate context • Drives performance of operations • Developed with stakeholder and aboriginal community input • Able to communicate outcomes useful to stakeholders, producing meaningful engagement and questions • Analysis conveyed in direct and understandable way, agreement on interpretation and significance
Accurate	• Ensure precise, repeatable, scientifically and statistically valid. • Make robust across companies and sectors, over many years. • Build on and enable consistent and standardized processes for collection and management of data. • Use objective third party to audit.	• Audited • Repeated • Compared between companies and sectors, over time (enables comparisons and performance tracking) • Resolves fights over 'facts'/data • Cross-sectoral support for metrics • Has a process for addressing qualitative information or issue areas
Credible	• Transparent and independent. • Verify through independent objective third-party management and oversight. • Provide open, free access to information, process and design, assumptions and limitations.	• System inherently trusted by all stakeholders • Funding and implementation distinct • Open access to data which is then used across audiences

It can be helpful to think of Table 5 in this way. A metrics developer should *do* all the actions outlined in the 'principle definition' column and use the criteria in the 'what does successful implementation look like' to *evaluate* if all the actions were done properly. The result of *doing* the actions successfully is *achieving* the principle.

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Conclusions of the forum organizers

The design principles of relevancy, accuracy and credibility capture most if not all other principles discussed, and their definitions suggest a list of guiding questions for metric system designers. For instance, relevancy captures the desire for consistent yet flexible metrics and metrics that are clear and understandable for the intended audiences. To be relevant and credible also requires stakeholder engagement, transparency when possible and building of trust.

For a metrics developer, a number of questions will have to be asked and answered as the system is designed to ensure these principles are met. Questions may include:

Principle: Relevant

- **Stakeholder engagement**
  - What stakeholder engagement process will be used during metric selection and design as well as during long-term management of the metrics system?
  - How will improvement be measured and communicated?
  - Are the metrics aligned with local, regional, provincial and federal issues/objectives and goals?
  - Who are the metrics designed for, and how will they be made understandable?
  - Which stakeholders do you engage with and to what extent?
  - How will meaningfulness to audiences be determined?
  - How will the metrics system build in continuous improvement?
- **Comparability**
  - What international metrics (like GRI) will be used to ensure comparability?
- **Timeliness**
  - How often will the metrics be reported? Is this time period sufficient?
- **Consistency and flexibility**
  - How will metrics be adapted to maintain data integrity and relevance over time?
  - How often will the set of metrics be reviewed and modified to align with evolving expectations of what is "relevant"?

Principle: Accurate

- Who will be responsible for collecting the data?
- Who will audit the system? How often?
- With what other industries should the metrics be compared with?
- How will scientific and statistic validity be determined?
- What's the process for addressing qualitative information?

Principle: Credible

- How will data be made transparent? If data can't be made public, what process will ensure it's trusted? How will confidentiality be protected?
- How will the system be funded? Will the funding be consistent?
- Who will host the data?
- How will the metrics be accessed?

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Forum organizer conclusions and recommended next steps

Summary of audiences

A successful metrics system for the oilsands will cover environmental, social and economic aspects and allow for benchmarking across companies, projects or regions, holding companies accountable to compliance and performance targets, and evaluating a company's social license to operate. To achieve success, metrics designers must understand and respond to the needs of the eleven primary audiences identified in the forum:

- Oilsands industry
- Other industry (suppliers, 'competing' industries)
- Governments (federal, provincial, territorial and aboriginal)
- Financial community
- International and foreign governments

- Academia
- Aboriginal communities
- Local communities
- Non-governmental organizations and foundations
- Consumers and the general public
- Media

Summary of design principles

Embedding a number of key principles into the design of a system will improve the support and acceptance of the performance metrics by all audiences. During the forum, participants were tasked with collectively determining what these primary principles are and what they mean for an oilsands metrics system. Through discussion and debate, delegates identified their fundamental principles. Forum organizers, incorporating conversation from the forum, information in feedback forms and each individual's top 5 principles, then developed the three principles in Table 6. These three principles represent the forum organizers best attempt at defining three widely supported principles. However, they were not voted on by forum participants.

Table 6: Summary of primary design principles

Principle	Definition	Elements of successful Implementation
Relevant	Meaningful to the intended audience	• Widely used • Drives performance • Developed with stakeholders
Accurate	Precise, repeatable, scientifically and statistically valid.	• Withstands rigorous audits and reviews • Adapts to changing needs and scientific understanding • Has a process for addressing qualitative information
Credible	Open to public scrutiny, transparent and independent	• Trusted by stakeholders • Information widely available • Free from perceptions of bias

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Next steps

Designing an effective system for performance metrics requires time and commitment from all stakeholders. At the forum, many participants were keen to push forward to the next steps of creating the metrics themselves. We believe, however, the foundational groundwork should be completed first to ensure any metrics system encompasses a complete sense of the audience and guiding principles. Without these, time and resources may be wasted.

We are advancing the discussion at the forum by leading the following:

Providing Information

- **Summary report:** The summary report will be posted to the website and distributed to all forum invitees (> 300 people) and posted to the forums public website. It will be available in July.
- **Forum interviews:** The forum organizers interviewed eight forum participants: Clive Mather, Jamie Bonham, Barry Worbets, Jennifer Grant, Peter MacConnachie, Brad Stelfox, Chris Powter and Kim Sturgess. These interviews will be posted on the forum website in late May. All forum invitees will be notified when they are posted.

Engaging a broader audience

- **Webinars:** The forum organizers hosted a series of webinars in early June to share the results of the forum and seek feedback from those groups that were under-represented at the forum including, but not limited to, aboriginal communities, non-governmental organizations, the federal government and the social and economic communities. Specific feedback from these webinars can be found in Appendix C.
- **Follow-up conversations:** The forum organizers are actively pursuing conversations with the Government of Alberta, OSLI, CAPP and oilsands companies interested in oilsands performance metrics. The goal of these conversations is to ensure those developing metrics use the information from the forum and, to the extent possible, support the development of oilsands performance metrics.

Forum organizers' recommendations

The enormous potential of oilsands performance metrics can only be achieved if the metrics are perceived as relevant, accurate and credible, and if they are used by the full range of audiences. Developing and implementing successful metrics requires both scientific rigour and inclusive stakeholder engagement. In addition, an incredible amount of work on oilsands metrics has already been completed by groups such as the Alberta Government, oilsands companies and the Canadian Association of Petroleum Producers and internationally by groups like the Global Reporting Initiative. The forum organizers are not advocating for new metrics processes. The checklist can be used on any existing, combination of metrics processes or contemplated metrics processes. We encourage metric developers to use this checklist for their own development process or processes.

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Table 7: Checklist of conditions for success for metrics development and reporting

Consider Audiences
❍ Can audiences use the metrics to benchmark between company and project performance and between different oil sources?
❍ Can audiences use the metrics to assess and communicate compliance/performance and hold companies and governments accountable to commitments?
❍ Can audiences use the metrics to establish, sustain and evaluate a company or project's social license to operate?
❍ Do the metrics cover economic, social and environmental metrics?
Consider Principles – Relevant, Accurate and Credible
❍ Are or were the metrics developed using a set of well-defined guiding principles?
Relevant
❍ Are the metrics relevant?
❍ What stakeholder engagement process will be used during metric selection and design as well as during long-term management of the metrics system?
❍ Are the metrics aligned with local, regional, provincial and federal issues/objectives and goals?
❍ Are the metrics comparable between companies and across sectors?
❍ Is there a process for reviewing and modifying metrics in line with evolving expectations of what is "relevant"?
❍ Is there a process for incorporating qualitative information?
Accurate
❍ Are the metrics accurate?
❍ Are the metrics audited? By whom and how often?
❍ Is there a process for determining scientific and statistical validity?
Credible
❍ Are the metrics credible?
❍ Are the metrics and their development process transparent to the extent possible?
❍ Is the compiler and host of the metrics trustworthy?

More information

Looking for more information? Check the additional resources section of the forum's website, available at: http://www.oilsandsmetrics.ca/resources.html.

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Appendix A

Electronic voting results

Participants were given the opportunity to vote on the compiled summaries for both the audiences and principles after each breakout session. 'Thumbs up' signaled participants' support or agreement with the summary. 'Thumbs sideways' was used to express acceptance of the summary; that the participant could 'live with it'. 'Thumbs down' indicated participants' disagreement with a fundamental aspect of the summary. After voting on each summary, those who voted 'thumbs down' were given the opportunity to express what they felt was misguided or lacking.

Table 8: Summary of voting on audiences for oilsands metrics

Audience Summary			
Audience	**'Thumbs Up'**	**'Thumbs Sideways'**	**'Thumbs Down'**
Oil Industry	34	11	3
Other Industry	15	30	4
Government	33	11	4
Financial Community	33	12	2
International/Foreign Governments	33	12	4
Academia	29	14	1
Aboriginal Communities	25	19	4
Local Communities	32	10	3
NGOs	27	16	3
Consumers/Public	16	24	5
Media	13	23	11

Table 9: Summary of votes for principles

Principle Summary			
Principle	**'Thumbs Up'**	**'Thumbs Sideways'**	**'Thumbs Down'**
Top 5 Principles	12	18	10
Relevant	31	0	0
Accurate (Credible)	27	4	2
Consistent	27	6	4
Trustworthy	17	5	5
Fair	8	5	18
Clear	23	5	5

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Appendix B

Summary of feedback forms

According to the feedback, the forum was successful in meeting its objective of increasing awareness and understanding of stakeholder opinions and expectations on oilsands performance metrics to support existing or emerging monitoring and measurement systems. There were concerns surrounding the location of the venue, food, and networking opportunities, which will be considered in future events. As well, efforts will be made to deliver material in a more timely manner to allow participants time to review information provided.

Some of the common comments and constructive criticism included:

- Lack of diversity, especially aboriginal involvement
- Interest and desire for next steps
- Weaker afternoon session
- Long process, lots of work left
- Consensus that metrics development is a good thing
- Different backgrounds actually want the same thing, less variety in views than expected
- Good facilitation, liked voting technology

Webinar comments

Three webinars were held following the event to review the results of the forum. The following questions and comments were collected during these webinars:

- Could add that a system should allow companies to help identify key performance focus areas.
- How were aboriginal organizations engaged?
- Is there going to be follow-up or engagement of aboriginal organizations on how performance metrics will be relevant for them?
- Involving stakeholders in the design phase is a procedural step that could help ensure that the compiler and host are trustworthy. Ask the question: who do we collectively trust to compile and host this information in accordance with a practice of "joint-information gathering"?
- These are fine, but I'm not really seeing how these are distinctively oilsands metrics. These principles and features are aspects that would equally apply, say, in the North Saskatchewan region.
- I think the relevance principle could be tightened up to say the metrics will be designed to answer stakeholders' questions. "Developed with stakeholders" could still result in a system that produces information has meaning, but is still slightly off the mark.
- Are the metrics intended to be applied on a facility specific level or on a regional, aggregate basis?
- I think the question on "Accurate" are relevant for some metrics, but I can think of a number of important metrics that wouldn't pass either of those two questions (well, not without some difficulty anyways). This section (Accurate) seems the least useful in a broad sense.
- I feel that the accurate definition is all fine, but not all metrics will fit the definition simply because they will inevitably be more qualitative in nature (not scientific, etc).

- Is it possible to see the list of the participants at some point? What were the criteria used to determine who could participate in the forum?
- To that point, how do we incorporate traditional knowledge information to this construct?
- I agree with all four principles but a key will be to have a metrics that can be understood by a broad set of audiences, ie, use of plain language to explain the information. The metrics could be used as part of overall energy literacy for Canadians.
- For industry, I would add social license to grow not just operate.
- Something can be relevant but you need to understand the concept before you can determine if it is relevant!
- In terms of audit, are you thinking of a specific methodology? ISO?
- Under government, should we create a specific box for regulators?
- Credibility is the objective. The principles help meet this objective.
- Something that seems to be missing (that relates to principles) is that there needs to be agreement between all stakeholders that these metrics will be used, ie without adoption the metrics system will not be successful.
- I agree with the concepts, but Credible could be considered overarching... ie you will not have a credible metric unless it is also relevant and accurate. Perhaps credible should be along the lines of transparent?
- Credibility is important. Just not sure how you would go about deciding if something is perceived as unbiased.

- Maybe there is something about accessibility to information and metrics. Presumably they'd be widely publicized and available to all audiences, in a variety of formats and languages?
- Because it's an issue or concern doesn't mean it's an actual problem (perceived versus real). Metrics should be selected to monitor real issues and clarify misperceptions.
- You might adapt your metrics depending on the issue or concern, but regardless it should be accurate.
- Benchmarking within the oilsands sector is important however it should include the rest of the energy industry so real comparisons can be made and issues identified (are perceptions real? test assumptions).
- Yes, but difficult to manage since perceptions are highly subjective.

- Each user needs to determine their environmental, social and/or economic objectives or outcomes so the appropriate metric can be developed. Too often monitoring programs fail because of a lack of clear objectives. Goes back to core principle of relevant.
- It needs to be relevant to the issues being managed and not just relevant to the audience.
- Why Oilsands specifically and not the Energy Industry as a whole? Any performance measures or metrics ought to be developed for the energy industry as a whole so meaningful comparisons can be made.
- Credible sounds like a principle that an outsider would insist on. Within the industry, we don't debate credibility. We are credible. Transparent is perhaps a better way to look at this.

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Endnotes

1   Royal Society of Canada, *Environmental and Health Impacts of Canada's Oil Sands Industry* (2010), 438, http://www.rsc.ca/documents/RSCreportcompletesecured9Mb_
    Mar28_11.pdf.

2   Royal Society of Canada, *Environmental and Health Impacts of Canada's Oil Sands Industry,* 438. RSC found that tangible improvements could be made to environmental
    assessments by "implementing a central repository of regional environmental, community health, and infrastructure data that provides effective public access." North West
    Ethical Investments recommends that oilsands companies include public disclosure material information on ESG strategy, performance and risk mitigation systems and
    engage in constructive dialogue with concerned shareholders, in their benchmarking report *Lines in the Sands* report (Northwest & Ethical Investments. *Lines in the Sands:
    Oil Sands Sector Benchmarking* (2009) http://www.ethicalfunds.com/SiteCollectionDocuments/docs/lines_in_the_sands_full.pdf).
    CAPP (Canadian Associatin of Petroleum Producers, *Responsible Canadian Energy: Oil Sands Progress Report* (2009), 50, http://issuu.com/capp/docs/rce-oilsands-
    report?mode=embed&layout=http://skin.issuu.com/v/light/layout.xml&showFlipBtn=true). and Suncor (Suncor Energy, *2009 Summary Report on Sustainability* (2009),
    http://www.suncor.com/pdf/2009_Report_on_Sustainability_Summary.pdf) both report on oilsands performance metrics. The Pembina Institute released two reports on
    environmental performance metrics for the oilsands, both available online: http://www.pembina.org/pub/1571 and http://www.pembina.org/pub/1981

3   Suncor Energy, *2010 Report on Sustainability* (2011) http://www.suncor.com/en/responsible/1434.aspx or Shell Inc. *Shell Sustainability Report 2010* (2011) http://www.shell.
    com/home/content/environment_society/reporting/s_reports/

4   Government of Alberta, "Province advances land reclamation programs," news release, January 2011, http://www.alberta.ca/acn/201103/30079C433FD78-A16A-B3F8-
    76EA527E7353E6C5.html.

5   The Energy Resources Conservation Board, the Alberta Department of Energy, Alberta Sustainable Resource Development and Environment Canada support Alberta
    Environment's oilsands portal.

6   RSC in *Environmental and Health Impacts of Canada's Oil Sands Industry* found that tangible improvements could be made to environmental assessments by "implementing
    a central repository of regional environmental, community health, and infrastructure data that provides effective public access." North West Ethical Investments recommends
    that oilsands companies include public disclosure material information on ESG strategy, performance and risk mitigation systems and engage in constructive dialogue with
    concerned shareholders, in their benchmarking report *Lines in the Sands* report.

7   Robert Eccles, Beiting Cheng and Daniela Saltzman, eds., *The Landscape of Integrated Reporting: Reflections and Next Steps*, (Harvard Business School, 2010), http://
    hbswk.hbs.edu/pdf/The_Landscape_of_Integrated_Reporting.pdf.

8   Ibid.

9   Global Reporting Initiative, *GRI Sector Supplement* (2010), http://www.globalreporting.org/NR/rdonlyres/F6D8F94E-F810-4C1F-87C9-D5F0702A3EB3/2981/
    SSLeafletGRI2009FINAL1.pdf.

10 Global Reporting Initiative, *Sustainability Reporting Guidelines* (2011), http://www.globalreporting.org/NR/rdonlyres/660631D6-2A39-4850-9C04-57436E4768BD/0/
    G31GuidelinesinclTechnicalProtocolFinal.pdf; Government of Alberta, *Provincial Environmental Monitoring Panel For Monitoring Evaluation & Reporting for the Lower
    Athabasca River: Terms of Reference* (2010), http://environment.alberta.ca/documents/Environmental_Monitoring_Panel__TOR_December_2010.pdf; Alberta Innovates –
    Energy and Environment Solutions, summary notes from Alberta Oil Sands Sustainability Reporting Initiative Workshop, January 11, 2011, Calgary, AB; Eccles et al., editors,
    The Landscape of Integrated Reporting: Reflections and Next Steps.

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