



Diesel Subsidies — *Simplified*

Part I

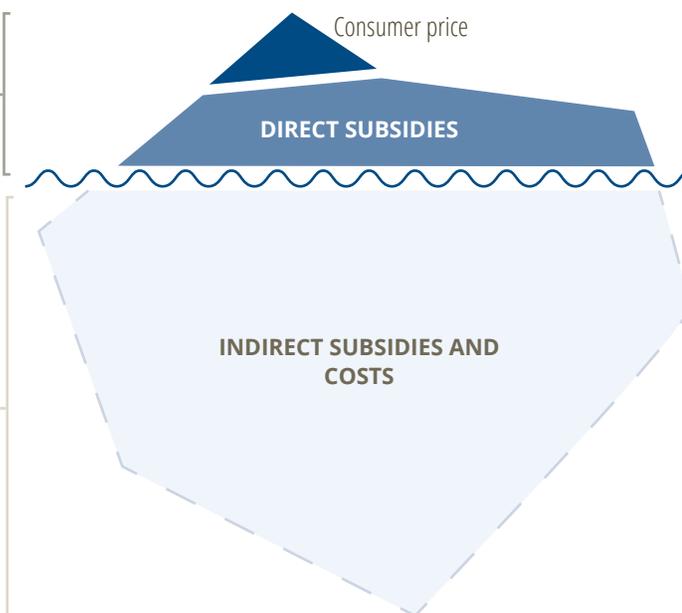
This backgrounder expands on [The True Cost of Energy in Remote Communities](#) (March 2019) and focuses on diesel energy subsidies. It outlines what diesel subsidies are, how they work, and the important role they play.

As the use of diesel declines in remote communities across Canada, this backgrounder also outlines opportunities to either spend less on these subsidies or redirect the savings for other uses.

FOCUS OF THIS BACKGROUNDER:

The **cost of energy** for electricity and heat providers (mostly utility corporations) to generate and distribute energy.

Beneath the surface of the metaphorical iceberg are financial and environmental, health and societal costs to remote communities and residents that are hard to quantify and not accounted for.



DIRECT SUBSIDIES applied directly to reduce the price of energy	
Fuel costs	Reduces cost of diesel fuel & transportation
Infrastructure	Supports capital upgrades or replacement of diesel generating systems
Energy bills	Lowers the consumer's energy bills.
Social assistance	Support public housing, high cost of living and offsets late payments

INDIRECT SUBSIDIES applied to non-energy costs	
Environmental	Costs related to cleanup or remediation due to diesel spills
Health	Costs related to respiratory illnesses from diesel pollution
Infrastructure	Costs related to the impact on infrastructure from climate change (shifting of buildings from permafrost melting)
Indigenous culture and way of life	Costs related to loss of habitat, traditional hunting and Indigenous ways of life
Societal	Overall societal costs of continued reliance on diesel

We will need to determine the future role of subsidies in remote communities as the energy landscape shifts.

Key takeaways



Diesel subsidies are not inherently bad but they are misunderstood, hidden, and obscure the real cost of producing energy from diesel, making it difficult to compare the actual cost of diesel to the costs of clean energy alternatives.



Supporting affordable energy prices through subsidies has been, and remains, necessary to make energy reasonably affordable to remote customers. Governments have developed different policies and programs to reduce these energy costs, but they are still high.



Energy efficiency is one of the best ways to reduce costs including subsidies – every unit of energy saved is energy that does not need to be continually subsidized!



Federal government plays an important role even though energy is within provincial/territorial jurisdiction. The federal government supports diesel subsidies through payments to provincial/territorial governments, utilities, and Indigenous communities. These are both supply-side (ie, payments to utilities) and demand-side (ie, payments to reduce the cost of energy for the consumer) subsidies as well as direct and indirect subsidies.



Diesel subsidies impede clean energy progress because utilities and customers depend on subsidies to reduce the cost of diesel. But this dependency makes it difficult to advance solutions such as energy efficiency, demand-side management, or net metering programs.



Diesel electricity subsidies cost \$300 million to \$400 million every year. This is an unrecoverable, direct cost and does not account for the indirect costs to health, infrastructure, and cultural way of life in remote communities.



Clean energy requires more government support to be competitive in remote communities where diesel is heavily subsidized. An increase in financial and policy support for clean energy will help overcome the barriers that diesel subsidies create.

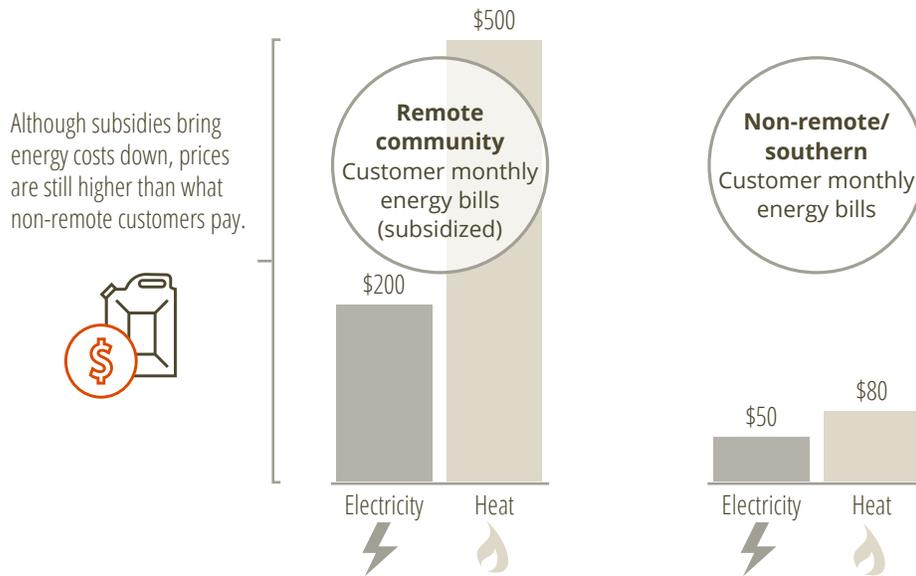


The transition from diesel to energy efficiency and renewable energy will result in **better health outcomes, better environmental outcomes**, and delivering more affordable electricity – and is also about **creating new opportunities for Indigenous communities**.

Impact on energy bills

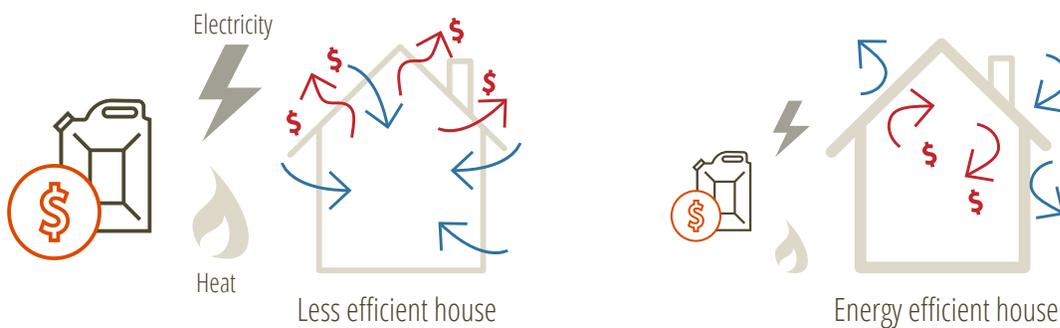
Diesel subsidies are not inherently bad. They serve the valuable purpose of reducing the high cost of providing heat and electricity to a reasonably affordable price. Without electricity and heating subsidies, energy could be 10 to 30 times more expensive in remote areas. Even with subsidies, the energy prices customers pay

in remote communities are on average six to 10 times higher than energy prices in the rest of Canada. Diesel subsidies are often hidden and mask the real cost of energy. But when subsidies are fully accounted for, diesel energy will often be more expensive than other energy sources.



The reward of energy efficiency

Increasing the energy efficiency of housing and buildings is the most effective way to reduce the need for heating subsidies. Every unit of energy that is not consumed is one unit of energy that does not need to be subsidized! Since heating does not receive as much in subsidies as electricity does, reducing the demand for heating through energy efficiency is the best way to reduce costs and associated subsidies.



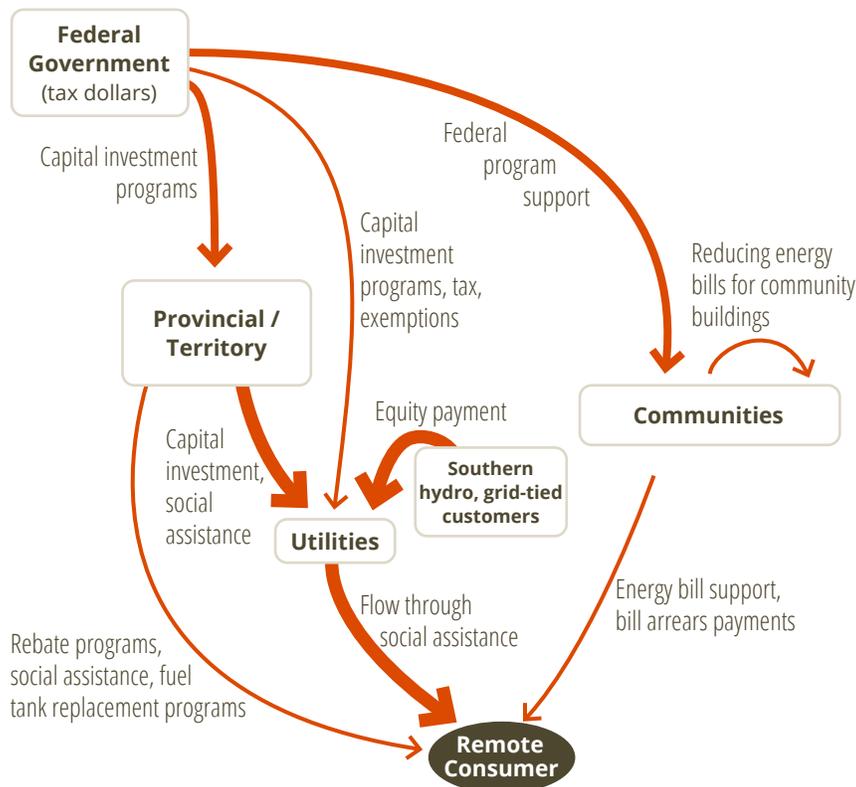
Energy efficient buildings cost less in continual subsidies because they use less energy

Who pays for direct subsidies?

The federal government, provincial and territorial governments, utilities, remote communities, and customers from southern regions and non-remote communities provide the financing that goes into direct subsidies.

Who receives subsidies?

Provincial and territorial governments, utilities, Indigenous governments, remote communities, and end-use consumers either receive subsidies in direct revenue or receive them through discounted pricing.



The diagram illustrates the money flow. The thickness of the arrow illustrates the source and end point of the majority of subsidies.

Who provides subsidies?

Diesel subsidies come from two main sources: customers living in non-remote communities, and federal, provincial, and territorial governments.

Electricity customers

in southern regions and non-remote communities

Customers connected to provincial grids and non-remote customers fund subsidies through their electricity bills to reduce the cost of energy in remote communities in their jurisdictions.

These are typically referred to as “cross-subsidies”. These subsidies are usually collected by the utilities and passed on to remote customers.

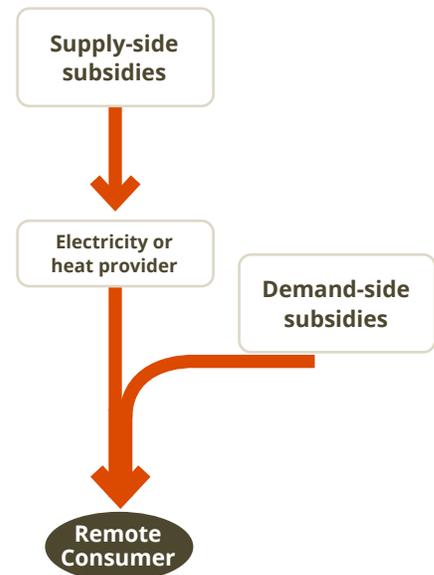
Governments

Government subsidies include federal transfers to provincial or territorial governments, government transfers to utilities, government rebate programs, federal transfers to Indigenous communities, and Indigenous government transfers to consumers in the community.

Tracking the flow of subsidies is complicated. In fact, it is still not well understood, even by those involved.

Examples of direct subsidies

Direct subsidies are used to lower the price of energy paid by the end user, or consumer.



Supply-side versus demand-side subsidies

Supply-side subsidies are provided to **electric utilities or heat providers** to reduce how much they have to pay to produce energy.

Demand-side subsidies are provided to **end consumers** to lower the cost of energy to an affordable price.

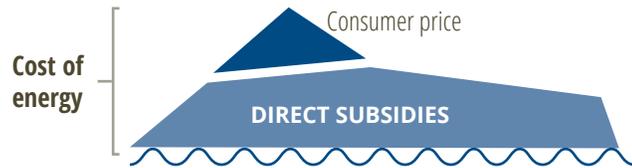
Direct subsidy examples

The table below includes some of the most notable subsidies applied to diesel, illustrating the different categories, funders and beneficiaries.

SUBSIDY	HOW IT WORKS	WHO PAYS	WHO BENEFITS
Supply-side			
 Tax exemptions on diesel fuel, including an exemption from the carbon tax	In some cases, diesel fuel for electricity is exempt from GST/HST, fuel tax and carbon tax	Federal, provincial/territorial governments in unrealized revenue.	Utility does not pay taxes, and hence energy costs to consumer do not go up
 Financial assistance to electric utilities	Covers costs of capital upgrades, and operation and maintenance	Mostly provincial and territorial governments, sometimes federal government	Utilities receive directly
 Emergency high fuel costs and transportation costs	Payments to support emergency situations or high transportation costs (shipping by air or transporting long distances)	Federal, provincial/territorial governments	Utilities receive directly
Demand-side			
 Ratepayer cross-subsidies	A small portion of the electricity bill paid by consumers in other parts of the country is redirected to offset the cost of electricity paid by remote consumers	Grid-tied customers as well as customers in NWT and Yukon hydro zones	Diesel ratepayers receive lower bills
 Social housing and low-income communities	Utility bills for social housing and also low-income customers are reduced, eliminated, or covered when the customer is unable to make payments.	Federal, provincial/territorial governments, utilities, remote communities	Low-income customers and customers requiring social assistance receive rebates

The cost of energy

With a few exceptions, utilities serving remote communities are required to submit the cost per unit to produce and deliver electricity. The rate submitted must be approved by a utilities commission. Once approved, the rate is understood as the “cost of energy” or, in utility terms, “the cost of service.” The cost of energy is often expressed in dollars per kilowatt-hour (\$/kWh).



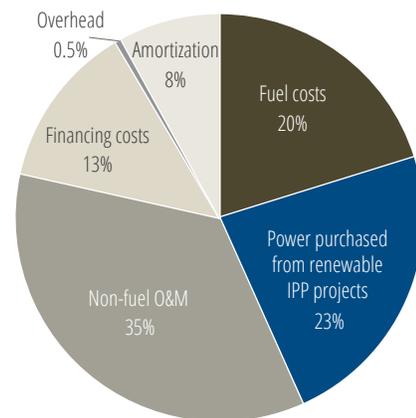
Cost of energy for utilities includes the **production, distribution, and retail selling** of electricity. In most cases, it also includes **storage** of diesel fuel in tank farms.

What makes up the cost of energy?

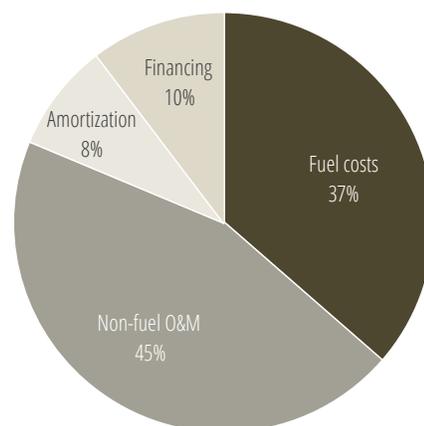
The table below provides an overview of the costs and general categories used by utilities:

Item	Description and examples
Fuel costs	Cost of diesel fuel and associated transportation costs plus taxes
Diesel storage	Capital and maintenance cost of diesel storage tanks
Infrastructure, operations, and maintenance costs	Diesel infrastructure upkeep and maintenance, labour, travel, customer service, billing
Financing	Loan payments including accrued interest
Overhead	Overhead or shared costs
Amortization (depreciation)	The annual amortized value of diesel infrastructure
Return on rate base	Profit (if allowed) on the utility's rate base
Purchased power	From Independent Power Producer (IPP) contracts

Cost of energy: examples



Utility A



Utility B

Two examples showing the makeup of utilities’ cost of energy and how different categories and their contributions define their costs.

Subsidizing utility energy costs



Direct subsidies reduce the cost of energy in remote communities so that it is a reasonably affordable price.

However, different governments provide differing amounts in subsidization. Consequently, this cost of energy varies among utilities and so does the price of electricity for the end consumer. This is because different governments depend on how much government financing they receive, and the degree to which they can rely on revenue from non-remote customers (cross subsidies).

Diesel subsidies for electricity alone add up to between \$300 million and \$400 million annually!



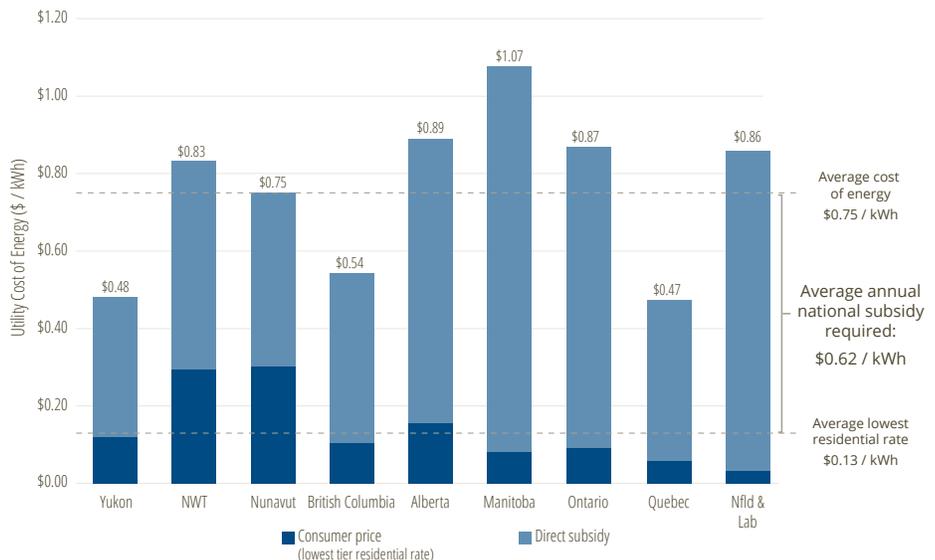
This is the estimated year-over-year cost of **direct subsidies** required to maintain diesel usage in remote communities.

This is an unrecoverable cost and is just the tip of the iceberg.

Cost of energy across remote communities

This graph shows the cost of energy for various utilities compared to the lowest residential rate prices, and indicates levels of subsidization.

Data derived from utilities' public General Rate Applications and publicly available data on residential electricity rates.



Highlights

Different circumstances across jurisdictions affect a utility's cost of energy and end-consumer energy prices. The level of subsidization varies depending on the financial resources that support subsidization. For example, the cost of energy is relatively similar between Nunavut and Newfoundland and Labrador but because of the large pool of grid-tied customers in Newfoundland and Labrador, residential rates in remote

communities are significantly lower.

Nunavut and NWT residential rates exceed those of all other jurisdictions at \$0.30/kWh. Even though subsidized, this is the most expensive residential electricity in Canada because these territories have fewer financial resources to draw upon to reduce electricity prices.

Shifting opportunities

Diesel subsidies have kept energy affordable in remote communities for decades. But, with the energy landscape in remote communities shifting, it is time to reconsider the role they play.

New ways of reducing demand for energy through **energy efficiency**, or generating energy with **renewable energy systems**, has the potential to greatly reduce the amount of financing currently used to subsidize diesel fuel, diesel infrastructure, and the environmental degradation as well as negative social and health impacts of burning it.



The clean energy transition is also being supported, primarily, by government subsidies, but more is needed and redirecting diesel subsidy savings is an opportunity to redirect funding to clean energy.

Any reallocation of funding must be done in consultation with the Indigenous communities that have been bearing the brunt of the negative and intangible costs to human and community well being from relying on diesel fuel.

We need to decouple the reliance on subsidies for diesel and co-determine where diesel subsidies are needed and where they can be redirected to focus on supporting the clean energy transition.

What's next: Diesel Subsidies Simplified Part II

Diesel Subsidies Simplified Part II examines the cost of subsidies to support fuel, infrastructure, energy bills, and social assistance.

Part II includes solutions that become available when

remote communities continue their clean energy transition and offers policy recommendations that address ways to transition the underlying structures and mechanisms supporting diesel subsidies to ways of moving to clean energy.



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