

Nanoleaf EV Charger – Sole Canadian Distribution, Funded by Clean Fuel Regulations Credit Revenue

Prepared 2026-08-25. Scope: residential and light-commercial Level 2 only. Primary sources: SOR/2022-140 (Justice Laws consolidation, current to 2026-06-21, last amended 2024-09-30); ECCC *Specifications for Fuel LCA Model CI Calculations* v4.0 (2025-01-30); "Nanoleaf EV Charger – OCI EOI" deck, 24 slides, dated 2026-03-20.

Grading key

GRADE	MEANING
P-LEG	Verbatim text of SOR/2022-140 or another statute/regulation, section cited
P-GOV	Government/regulator publication that is not the legislation itself
P-DECK	The OVIN/OCI EOI deck – first-party, but an unaudited draft with editorial notes still in it
P-USER	The user's own first-hand knowledge – authoritative, unverifiable by me
S-TRADE	Trade press, analyst, vendor or aggregator marketing
DERIVED	Arithmetic from graded inputs, working shown
UNVERIFIED	Could not be confirmed from any source reached

1. The verdict

1.1 The price does not work. Here is the arithmetic.

The entire OVIN grant application is built on one positioning claim, made twice: the product is "**aggressively priced at \$549 MSRP, democratizing home charging.**" (P-DECK)

The actual MSRP is **\$700 USD** (P-USER). That is **27.5% above** the price the grant application was written around:

$$700 / 549 = 1.2750 \rightarrow +27.5\%$$

In Canadian dollars, at the deck's own Bank of Canada rate and at a current-band rate:

$$\begin{array}{lll} 700 \text{ USD} \times 1.3678 \text{ (deck's BoC rate)} & = & \$957.46 \text{ CAD} \\ 700 \text{ USD} \times 1.384 \text{ (current band)} & = & \$968.80 \text{ CAD} \approx \$969 \\ 549 \text{ USD} \times 1.3678 & = & \$750.92 \text{ CAD} \end{array}$$

(DERIVED)

So **\$969 CAD was never arbitrary – it is the deck's own product at its real price.** Use \$957–\$969 CAD as the test band; I use \$969 throughout as the conservative-for-the-deal figure.

Now the finding that decides the retail question. The same deck states the problem it exists to solve:

"Existing chargers are expensive (\$700–\$1,200), industrial, and disconnected from the home." (P-DECK)

\$969 CAD lands **inside that band**. Read the band as USD and \$700 USD lands **exactly on its floor**. Either reading gives the same result: **the product is now priced at the pain point it was pitched to fix**. The affordability thesis does not survive its own price, and the grant narrative — "democratizing home charging" — is no longer a description of the product.

Against the actual Canadian retail field this is not close (S-TRADE, observed 2026-08-25):

COMPARATOR	CAD	VS \$969
Grizzl-E Classic Connect 40A (J1772 or NACS, Wi-Fi)	499.99	1.94×
Autel AC Lite Home 40A (sale)	640.00	1.51×
Grizzl-E Ultimate 48A hardwired, J1772 or NACS, Wi-Fi, Canadian-made	649.99	1.49×
FLO Home X3 50A/12 kW, J1772 or NACS, Canadian-made	699.00	1.39×
ChargePoint Home Flex CPH50 50A (no NACS premium)	709.00	1.37×
Tesla Wall Connector 48A	760.00	1.28×
FLO Home X6 50A, aluminium, 5-yr warranty	899.00	1.08×
Watti Home Gen 2 48A (OCPP 1.6 + OpenADR, Canadian-made)	931.67–948.33	1.03×
Canadian residential ceiling — FLO Home X8, 80A/19.2 kW	1,499.00	0.65×

\$969 sits at the top of the 48A band with **no feature step over a \$649.99 48A unit** — a 49% premium for parity. (DERIVED)

And the real floor is not \$499. It is **zero**. Grizzl-E Club (United Chargers, Richmond Hill ON) gives a smart L2 charger away for a **\$100 refundable deposit**, adds a lifetime warranty, and pays the homeowner 3–10 ¢/kWh rising to a headline 15 ¢/kWh from 2026-10-01; 21,573 members and \$1,025,960 paid out in 389 days as at 2026-08-25. SWTCH gives one away for a \$300 refundable deposit at 11 ¢/kWh from 2026-09-01. ChargeLab pays 10 ¢/kWh on a charger the homeowner **already owns**, no hardware purchase at all. (S-TRADE)

Consumer incremental payback on \$969 against a free rival paying the same rate: never. To justify \$969 the Nanoleaf programme must *out-pay* the free rival by:

$\$969 / (3,500 \text{ kWh/yr} \times 5 \text{ yr}) = 5.5 \text{ ¢/kWh}$	premium for a 5-year payback
$\$969 / (2,455 \text{ kWh/yr} \times 5 \text{ yr}) = 7.9 \text{ ¢/kWh}$	premium for a 5-year payback
$\$969 / (3,500 \text{ kWh/yr} \times 3 \text{ yr}) = 9.2 \text{ ¢/kWh}$	premium for a 3-year payback

(DERIVED. 3,500 kWh/yr is ChargeLab's own figure and is self-interested, S-TRADE; 2,455 kWh/yr is a bottom-up sanity check on assumed inputs, DERIVED and not independently sourced.)

Stacking a 5.5 ¢ premium on Grizzl-E's 15 ¢ means paying **20.5 ¢/kWh**. In Ontario the *entire gross credit stream* is 36.3 ¢/kWh at \$300/credit and only **19.0 ¢/kWh at the 2024 average of \$157/credit** (DERIVED, §2.4). At \$157 a 20.5 ¢ payout is loss-making before a single dollar of hardware, verification, software or acquisition cost. There is no price premium that both justifies \$969 to the buyer and survives a normal credit price.

1.2 The thing that actually decides it is not price. It is who owns the charging data.

Section 1(1) of SOR/2022-140:

"charging-network operator means a person who operates a communication platform that collects data on the electricity supplied by a charging station and who is the owner of that data." (P-LEG)

For a residential charger that definition is the whole game, because s.101(1) expressly excludes "any charging station referred to in subsection 102(1)", and s.102(1)(a) assigns private-dwelling charging to the **charging-network operator**. A homeowner cannot create the credit. A distributor cannot create it by importing and selling the box. Only the party that operates the cloud and owns the data can. (P-LEG)

Now put the two halves of the research together, which is the reconciliation the brief asked for:

ONTARIO UNIT INSTALLED 2028, 3,500 KWH/YR, SCHEDULE 6 CI_E	\$157/CR	\$200/CR	\$300/CR	\$400/CR
Lifetime gross credit revenue (CP2028–2035, 31.89 credits)	\$5,007	\$6,379	\$9,568	\$12,758
\$969 hardware as a share of it	19.4%	15.2%	10.1%	7.6%
~\$250 landed cost as a share of it	5.0%	3.9%	2.6%	2.0%

(DERIVED, \$2.4 method. The \$250 landed figure is my own estimate, \$8.2.)

Whoever owns the cloud owns 80–98% of the value in this product. Hardware is a rounding error inside the credit stream. That is exactly why Grizzl-E and SWTCH give the box away, and it is why a distributor competing on hardware margin is competing in the wrong market.

The deck names OneRobotics Co. Limited (HK.6600, ~USD 3.22B market cap, 200+ engineers) as the technology partner (P-DECK). A grant applicant whose partner is a \$3B listed hardware group is not going to assign the s.1(1) data-ownership position — the 80–98% — to a Canadian distributor. **If Nanoleaf/OneRobotics owns the platform and its data, the premise "funded by CFR credit revenue" is unfunded, at any hardware price.** That question is unanswered by the deck and is not a price negotiation; it is the deal.

1.3 Diligence item #1 – the product may not qualify as a "charging station" at all

Slide 18 specifies **Matter over WiFi, BT pairing**. It does not mention OCPP, and it does not mention server-side energy reporting. (P-DECK)

Two hard gates sit upstream of every commercial question in this report:

- **s.1(1):** *"charging station means a device that is used in Canada to charge the battery on board an electric vehicle by supplying electricity to the electric vehicle and that is capable of communicating with a server, whether through the Internet or using a cellular signal or connected vehicle communications, to report the quantity of electricity supplied and the time at which it is supplied."* A unit that does not report **kWh and timestamp to a server** is not a charging station and creates **zero credits at any price**. (P-LEG)
- **OCPP 1.6+** is the de facto onboarding gate for every third-party Canadian aggregator — ChargeLab's published terms require it. (S-TRADE)

Matter and OCPP are not mutually exclusive, and Nanoleaf runs cloud infrastructure for its lighting line, so this is **not** a finding of failure. It is a finding that **the deck's own spec sheet evidences neither gate**. Mark **UNVERIFIED**. Resolve it before any commercial discussion, because if it fails, none of the rest of this report matters.

1.4 The one-line verdict

At \$969 CAD retail this deal does not work as a distributorship, and no hardware price fixes it, because the market clears at \$0 and the value is in the data, not the box. The only configuration with a real business in it is one where hardware is a subsidised cost line inside a credit position the distributor actually holds – which requires either the s.1(1) data-ownership grant for residential (unlikely to be given), or the **non-public light-commercial route under s.101**, where a distributor that retains title to the hardware is itself the charging-site host, creates credits in its own right, and – critically – **is not caught by the s.103 reinvestment ring-fence at all** (§3.4). That is the recommended channel, and it is a different business from the one in the prompt.

Price at which this deal DOES work: as a retail SKU, no price both clears Quebec's \$600 rebate floor and beats free hardware – see §5.4 for the full ladder and the one narrow exception (\$600 exactly, in Quebec only, on a rebate instrument that expires 2028-03-31). As a **landed cost inside a credit business**, $\leq \sim \$250$ CAD is the number that matters, and it is negotiable, because the 27.5% MSRP rise almost certainly did not come from the bill of materials (§8.2).

2. The regulatory foundation

Every claim below cites SOR/2022-140 by section. Where a verifier corrected the underlying research, the correction is stated and the corrected grade is the one shown.

2.1 Credit creation – the two routes

CLAIM	SECTION	GRADE
s.101(1) – a charging-site host may create credits for a station <i>"other than any charging station referred to in subsection 102(1)"</i> . No install deadline, no end date, no revenue-use obligation, no fair-market-value floor.	s.101(1)	P-LEG
s.102(1)(a) – a charging-network operator may create credits where <i>"the compliance period begins on or before January 1, 2035 and the electricity is supplied ... by a charging station that is owned and intended primarily for use by the occupants of a private dwelling-place and that is installed on or before December 31, 2030."</i>	s.102(1)(a)	P-LEG
s.102(1)(b) – public charging: no install deadline, no end date, but the station's location <i>"is indicated on the website or mobile application of the charging-network operator."</i>	s.102(1)(b)	P-LEG
The French text of s.102(1)(a) removes the English ambiguity about who owns: <i>"une borne de recharge dont sont propriétaires les occupants d'un logement privé"</i> – the occupants must be the owners. Title must pass to the resident; a retained-title residential lease or hardware-as-a-service does not qualify under s.102(1)(a).	s.102(1)(a) FR	P-LEG
Formula , both routes: credits (tCO _{2e}) = CI _{diff} × (Q × D) × 10 ⁻⁶ , where CI _{diff} = (R _{ee} × CI _{ref}) – CI _e , Q is kWh, D is 3.6 MJ/kWh (hard-coded).	ss.101(2), 102(2)	P-LEG
Q is metering-gated : measured by the charging station <i>"subject to any measurement accuracy or load test tolerances ... indicated in"</i> NIST Handbook 44. A second, independent hardware gate on top of connectivity.	ss.101(2), 102(2) (variable Q)	P-LEG
s.23(3) – energy used to create credits under a subsection <i>"must not be used by another person to create compliance credits under the same subsection, and any quantity that is used more than once under the same subsection is deemed not to create any provisional compliance credits."</i> Double-claiming voids the credit for both parties.	s.23(3)	P-LEG

CLAIM	SECTION	GRADE
Correction (verifier wins): the s.23(3) deeming is expressly confined to <i>same-subsection</i> collisions. A cross-subsection collision (e.g. a manufacturer back-end claiming under s.102(1) while a distributor claims the same kWh under s.101(1)) is not literally caught . Contractual exclusivity must do independent work; it cannot simply mirror s.23(3).	s.23(3)	P-LEG
s.23(5)–(6) — on creation a credit is owned by the registered creator who created it; a credit may have only a single owner. A s.21 agreement can assign the economics but never the ownership .	s.23(5), (6)	P-LEG
s.79(1) — a below-grid-average carbon intensity may be self-determined only for a station <i>"that is not intended primarily for use by the occupants of a private dwelling-place."</i> Residential is permanently locked to the provincial default . Light-commercial can pursue an approved lower CI.	s.79(1)	P-LEG

2.2 R_{ee} – the energy efficiency ratio

CLAIM	GRADE
R_{ee} = 4.1 for <i>"Light- and medium-duty electric vehicles with a curb weight of 2722 kg (6000 lb) or less, other than railway vehicles"</i> — ECCC, <i>CFR Specifications for Fuel LCA Model CI Calculations v4.0 (published 2025-01-30), s.9.4, Table 9</i> . Heavy-duty >2722 kg = 5.0; heavy rail = 4.6; electric marine = 3.1. Unchanged in the v4.1 (2025-12-12) and v4.2 (2026-04-30) pre-publications. v4.0 remains the Current Version and governs compliance period 2026.	P-GOV
Its application to s.102(2) is an inference, not a match. s.102(2) specifies <i>"the energy efficiency ratio for the light-duty class"</i> , and Table 9 has no row so labelled. s.101(2)(a)(ii) has a generic <i>"any other class"</i> fallback; s.102(2) does not — so the residential route is the exposed one.	DERIVED
2.5 is a statutory election, and a floor, not a downside forecast — ss.101(2)/102(2) let the creator elect the Specifications value <i>or</i> 2.5, so a rational creator always takes the higher. But 2.5 is the only value the Regulations themselves guarantee.	P-LEG
At R_{ee} = 2.5 and CI_{ref} 85.3 (2026), CI_{diff} goes negative on Schedule 6 CI_e in Alberta (–4.75), Saskatchewan (–23.75), Nova Scotia (–10.75) and Nunavut (–99.75) — zero credits in four jurisdictions.	DERIVED
ECCC can revise the Specifications without amending SOR/2022-140, and s.102(2) reads the value as at 1 January of each compliance period . This is an unhedgeable, non-legislative input.	P-LEG
Direction of drift is not obviously downward. ECCC's own s.9.4.1.1 rationale records that an NRC study using public data reached 4.2 for BEVs , and that 4.1 was retained because PHEV ratios averaged lower. A parc shifting toward BEVs exerts <i>upward</i> pressure. Observed stability: v4.0 unrevised for 19 months. Present this sensitivity two-sided.	P-GOV

2.3 CI_e – the provincial table, and the election

s.75(7): *"The carbon intensity of electricity for a province in which a charging station is located is, at the election of the registered creator, the amount set out for that province in (a) section 9 of Schedule 6; or (b) the Specifications for Fuel LCA Model CI Calculations."* (P-LEG)

PROVINCE	SCHEDULE 6 S.9 (P-LEG)	SPECS V4.0 TABLE 12 (P-GOV)	SPECS V4.2 PROPOSED, NOT IN FORCE (P-GOV)
Prince Edward Island	2	1	64
Quebec	5	5	7
Manitoba	7	7	8
British Columbia	11	11	13
Ontario	14	12	22
Newfoundland and Labrador	16	13	13
Yukon	30	28	26
Northwest Territories	71	58	151

PROVINCE	SCHEDULE 6 S.9 (P-LEG)	SPECS V4.0 TABLE 12 (P-GOV)	SPECS V4.2 <i>PROPOSED, NOT IN FORCE</i> (P-GOV)
New Brunswick	89	91	49
Alberta	218	166	139
Nova Scotia	224	204	145
Saskatchewan	237	218	180
Nunavut	313	290	290

(gCO₂e/MJ)

I use Schedule 6 as the primary basis throughout this report. Reason: Schedule 6 is P-LEG and fixed in the regulation, changeable only by amendment; the Specifications table is a moving ECCC document with a further revision already flagged for Fall 2026 on 2024 reference-year data. The verifier also flagged that exercising the election *differently in different provinces within one compliance period* — the `min()` cherry-pick — is **an interpretation of the election's granularity, not a stated permission** (DERIVED, not P-LEG). Where the Specifications election materially helps, I show it as a labelled upside:

PROVINCE	SCHEDULE 6	SPECS V4.0	IMPROVEMENT
Alberta	2,109 kWh/credit	1,512	28% better
Nova Scotia	2,209	1,906	14% better
Saskatchewan	2,464	2,109	14% better

Everywhere else the election moves the answer by ≤4%. (DERIVED)

The election also caps downside risk: because Schedule 6 is fixed in law, an adverse Specifications revision (the v4.2 proposal nearly doubles Ontario, 12→22) is absorbed by falling back to Schedule 6, while favourable moves flow through. This is the single strongest structural protection in the whole model.

2.4 CI_ref and the derived yield tables

Schedule 1, item 1, column 2 — liquid-class reference carbon intensity (P-LEG): 2022: 89.2 · 2023: 89.2 · 2024: 87.9 · 2025: 86.6 · **2026: 85.3** · 2027: 84.0 · **2028: 82.7** · 2029: 81.4 · **2030 and after: 80.1** gCO₂e/MJ.

Built-in decay: because CI_ref is the multiplied term, credit yield per kWh falls whether or not anything else changes. Ontario at Schedule 6 CI_e 14: CI_diff falls from (4.1 × 85.3) – 14 = **335.73** in 2026 to (4.1 × 80.1) – 14 = **314.41** in 2030+, i.e. **–6.35%**, and 827 kWh/credit becomes 883. (DERIVED)

kWh per credit, R_ee 4.1, Schedule 6 CI_e (method: kWh/credit = 10⁶ ÷ (CI_diff × 3.6); worked example Ontario 2026: 4.1 × 85.3 = 349.73; – 14 = 335.73; × 3.6 = 1,208.6; 10⁶ ÷ 1,208.6 = **827.4**):

PROVINCE	2026	2030+	GROSS ¢/KWH 2026 @ \$157 / \$200 / \$300 / \$400 PER CREDIT
Quebec	806	859	19.5 / 24.8 / 37.2 / 49.6
PEI	799	851	19.7 / 25.0 / 37.6 / 50.1
Manitoba	810	864	19.4 / 24.7 / 37.0 / 49.4
British Columbia	820	875	19.1 / 24.4 / 36.6 / 48.8
Ontario	827	883	19.0 / 24.2 / 36.3 / 48.3
Newfoundland & Lab.	832	889	18.9 / 24.0 / 36.0 / 48.1
Yukon	869	931	18.1 / 23.0 / 34.5 / 46.0

PROVINCE	2026	2030+	GROSS ¢/KWH 2026 @ \$157 / \$200 / \$300 / \$400 PER CREDIT
Northwest Territories	997	1,079	15.8 / 20.1 / 30.1 / 40.1
New Brunswick	1,065	1,160	14.7 / 18.8 / 28.2 / 37.5
Alberta	2,109	2,516	7.4 / 9.5 / 14.2 / 19.0
Nova Scotia	2,209	2,660	7.1 / 9.1 / 13.6 / 18.1
Saskatchewan	2,464	3,039	6.4 / 8.1 / 12.2 / 16.2
Nunavut	7,563	18,026	2.1 / 2.6 / 4.0 / 5.3

(DERIVED)

Two things fall straight out. **Because CI_e is subtracted, a cleaner grid yields more credits** — Quebec is 3.1× Alberta per kWh on Schedule 6, and QC + ON + BC hold ~92.7% of Canada's EV parc. And **Nunavut effectively dies by 2030** on Schedule 6 as CI_ref decays past its CI_e.

Lifetime credits per residential unit, 3,500 kWh/yr, Schedule 6, earning through CP2035 (DERIVED, summed year by year down the CI_ref path):

INSTALL YEAR	QC	ON	BC	AB	NS	SK
2026 (10 periods)	41.42	40.29	40.67	14.58	13.83	12.19
2028 (8 periods)	32.80	31.89	32.20	11.33	10.73	9.42
2029 (7 periods)	28.59	27.80	28.06	9.81	9.28	8.13
2030 (6 periods)	24.45	23.77	24.00	8.35	7.89	6.91

2.5 Credit price – what is plannable

MECHANISM	TEXT	GRADE
s.112(3) "Maximum price" — a participant who has pledged to offer a credit must accept an offer through the compliance-credit clearance mechanism at or below \$300 × (CPI_A ÷ CPI_B) , CPI_B being the 2022 annual average.	P-LEG	
s.118(3)–(4) — a primary supplier may self-create credits by contributing to a registered emission-reduction funding program at C ÷ P where P is \$350 , replaced every 1 January by $350 \times (\text{CPI}_A \div \text{CPI}_B)$.	P-LEG	
s.15(1) — credits created by that funding-program route are capped at 10% of the primary supplier's total reduction requirement . So \$350-indexed is a <i>partial-relief anchor over the marginal tenth of demand</i> , not a hard market ceiling ; the other 90% must clear in the open market and can price above it.	P-LEG	
s.119(1)–(2) — funding-program credits must not be transferred and are cancelled if unused on the following 1 December.	P-LEG	
CPI-indexed value of P — StatCan all-items CPI (2002=100): 2022 avg 151.242, 2025 avg 164.183 → $350 \times 164.183 \div 151.242 = \text{\$380}$ for compliance period 2025.	DERIVED	
No dollar figure is computable for compliance period 2026 — CPI_A for 2026 is the 2026 calendar-year average, which does not exist in August 2026.	P-LEG	
Observed prices: 2024 compliance-year volume-weighted average \$157.07 ; 2022 avg \$141.80 (min \$9.77, max \$300.00); 2023 avg \$127.30 (min \$6.75, max \$300.00). ECC's own caveat: <i>"the credit pricing information reported will not be economically robust until the market matures."</i> The reported minima are single bilateral transactions with only sub-\$1 transfers stripped — they are not clearing prices . Note the maximum pinned at exactly \$300.00 in both 2022 and 2023, which reads as the s.112(3) ceiling effect.	P-GOV / S-TRADE	
The "CFR credit prices crossed \$400 in early March 2026" figure.	UNVERIFIED	

Planning verdict: \$200–\$300 is the defensible planning band. **\$400 is not a planning price** — it sits at or above the CPI-indexed substitute-compliance anchor for the marginal slice of demand. \$157 is the right stress case; it is the only volume-weighted government figure in the set.

2.6 Reporting, verification and enforcement

CLAIM	SECTION	GRADE
Electricity credits are s.19(1)(d)(iv), so they go in the annual credit-creation report under s.120(1) , due 30 April of the following calendar year (Schedule 11 contents). Quarterly reporting (s.121) does not apply.	s.120(1), s.121(1)	P-LEG
s.125(1) — a registered creator who <i>is</i> a charging-network operator must file a compliance-credit revenue report: revenue received by 31 July after the period; use of that revenue by 31 July after the third period. Contents per Schedule 16.	s.125(1)	P-LEG
s.131(1) — reports under s.120 and s.125 must be verified by an accredited verification body .	s.131(1)	P-LEG
s.131(2) has TWO exemptions, not one (verifier correction): (a) a s.120 report needs no verification if no credits were created in the period; (b) a s.125 report needs none if no revenue arose from credit transfers in that period or the two preceding periods . (b) matters in early years, when credits are being created and banked but not yet transferred.	s.131(2)(a),(b)	P-LEG
There is no volume or revenue de minimis for the s.120 report . Verification is a fixed annual cost from the first credit onward — decisive for a small distributor's unit economics.	s.131(1)–(2)	P-LEG
s.148(2) — verification of a report containing financial information must include an audit to Canadian auditing standards (CPA Canada Handbook – Assurance) at reasonable assurance . The Schedule 16 revenue report is entirely financial. s.141(2)(d) requires a Canadian-CPA-credentialled financial-accounting specialist on that verification team.	ss.141(2)(d), 148(2)	P-LEG
s.142(1) permits every verification activity except the s.141(1) team leader and the s.139 independent reviewer to be subcontracted , so the CPA requirement does not narrow the supplier field.	s.142(1)	P-LEG
Rotation is INDIVIDUAL, not firm (corrects the inherited "–9 bodies with mandatory rotation"): s.147(1)–(2) — an individual may act for the same person on the same report type for at most 5 consecutive compliance periods , then must stand down for 3 . The firm need not change.	s.147(1)–(2)	P-LEG
Accreditation: s.138(1) allows the Standards Council of Canada, the ANSI National Accreditation Board, or a designated body. One stream counted 10 of 10 SCC-accredited CFR bodies holding Sector 3 (Electricity) ; the reviewer could not reproduce it (scc-ccn.ca returned HTTP 403). The count is not load-bearing — s.142(1) and s.143 make the field wide regardless.	s.138(1), s.140(1)(c)	P-GOV, count UNVERIFIED
Verification standard ISO 14064-3:2019 at reasonable assurance (s.148(1)); quantitative materiality 5% for non-CI quantities (s.150(b)); site definition expressly includes <i>"the location of a centralized computer data management system"</i> (s.152(2)(f)) — for a residential network the verifiable site is the data platform , not the homes.	ss.148(1), 150(b), 152(2)(f)	P-LEG
Records: 10 years, at a Canadian place of business . s.166(4): a registered creator <i>"must keep the information and documents at their principal place of business in Canada or at another place in Canada where they may be inspected."</i> s.166(5)'s offshore exception is limited to foreign CO2e projects, foreign suppliers and CI contributors — a registered creator running a Canadian residential network gets no offshore-records exception . Data residency is a hard requirement, not a soft one.	ss.166(1), (4), (5)	P-LEG
Error clocks: s.157 — 5 days to notify an error causing an over-deposit; s.156 — 60 days to file a corrected report plus updated verification; s.158(1) — the Minister may suspend credits already in an account where he has reason to believe excess credits were created, and s.110(1)(c) bars suspended credits from the clearance mechanism. Banked inventory can become unsellable pending resolution — a liquidity risk.	ss.156, 157, 158(1), 110(1)(c)	P-LEG

CLAIM	SECTION	GRADE
s.27(2)(a) — on voluntary deregistration the Minister must cancel any credits in the accounts. Sell down before deregistering. There is no provision for assigning or transferring a registration , so an acquirer's path to the credit stream is undefined on the face of the Regulations.	s.27(1)–(2)	P-LEG
Enforcement beyond credit cancellation is unassessed. The Regulations are made in part under s.5(1) of the <i>Environmental Violations Administrative Monetary Penalties Act</i> and ss.140, 326, 330(2) of <i>CEPA 1999</i> . Whether SOR/2022-140 appears in the schedule to the EVAMP Regulations, and the resulting penalty amounts, were not verified.	enacting clause	UNVERIFIED
No pending amendment found. The consolidation header reads " <i>current to 2026-06-21 and last amended on 2024-09-30</i> ", and no Canada Gazette Part I proposal to amend SOR/2022-140 was located. But ECCC's own targeted-amendments discussion paper (comments closed 2026-01-15) states that a credit-multiplier option " <i>may create a downward pressure on credit price, reducing the incentive for investments in actions that create credits under other CFR compliance categories (e.g. carbon capture and storage, electric vehicle charging).</i> " Whether a draft has since been gazetted was not checked.	consolidation header; ECCC discussion paper	P-LEG / P-GOV; gazette status UNVERIFIED

3. Who registers as the credit creator

3.1 A distributor is not a charging-network operator

Selling hardware does not make anyone a CNO. The s.1(1) test has two conjunctive limbs — **operates the communication platform and owns that data**. Nothing in it requires owning the charger, the site, or a commercial "network." Conversely, operating the cloud is sufficient. (P-LEG)

s.25(1) registration is open — a registration report under Schedule 3, no capital, bonding or nationality test in the text. **s.25(2)**: no provisional credits until the day after registration. **s.28**: the Minister opens liquid- and gaseous-fuel credit accounts. Schedule 3 registration requires only identity plus, for each station, **the name of the province** — for *all three* electricity routes; the privacy asymmetry appears at the **Schedule 11 annual-report** stage, where private-dwelling stations need province + serial number (item 6(c)(i)) while public (item 6(d)(i)) and site-host (item 5(b)(i)) stations need **GPS to five decimal places plus civic address**. (P-LEG; corrects an earlier claim that put the asymmetry at Schedule 3.)

Practical consequence for the s.101 route: routing homes through s.101 would put every customer's home GPS coordinates and civic address into an annual federal filing. That is a real consent and enrolment-friction cost, and it is a reason to prefer s.102 for residential even before anything else.

s.164(1) + s.1(1) "authorized agent" — every report and notice must be signed by the authorized agent, which for a corporation means "*any officer of the corporation who is authorized to act on its behalf.*" Filings cannot be delegated to an aggregator's or consultant's staff; **an officer must personally sign, every year**. And a s.21 agreement is invalid unless signed by the authorized agents of **each** party — so a per-host s.21 route needs an officer signature from every corporate site host. (P-LEG)

3.2 Four routes, and who can hold each

ROUTE	WHO CREATES	DISTRIBUTOR CAN HOLD IT IN ITS OWN RIGHT?	S.103 RING-FENCE?	2030 DEADLINE?	S.107 FMV FLOOR?
Residential s.102(1)(a)	Charging-network operator	Only if it operates the platform and owns the data	Yes	Yes	Yes
Public s.102(1)(b)	Charging-network operator	Same test; second route on the same registration	Yes	No	Yes

ROUTE	WHO CREATES	DISTRIBUTOR CAN HOLD IT IN ITS OWN RIGHT?	S.103 RING-FENCE?	2030 DEADLINE?	S.107 FMV FLOOR?
Light-commercial, non-public s.101(1)	Charging-site host	Yes — by retaining title to the hardware	No	No	No
Light-commercial, public-facing s.101 or s.102(1)(b)	Contingent	Contingent	Contingent	Contingent	Contingent

Two corrections are baked into that table, both from verification:

(a) The distributor CAN be the charging-site host. s.1(1): *"charging-site host means a person who **owns or leases** a charging station and who has the legal right to have the charging station installed."* Two limbs, neither of which is "owns the building." A distributor that **retains title** to chargers at a workplace, condo common area, strata or fleet depot and holds contractual installation rights satisfies both, is itself the site host, and creates under s.101 **with no per-host s.21 papering**. The cost of that route is balance-sheeting the hardware and the Schedule 11 item 5(b)(i) GPS/civic-address reporting. Both are commercial choices, not legal bars. (P-LEG)

(b) Public-facing light-commercial is not safely s.101. s.101(1) excludes any station *"referred to in subsection 102(1)"*, and s.102(1)(b) captures a station *"intended primarily for use by the public"* **whose location a charging-network operator lists on its website or app**. So the applicable regime for a public-facing site is partly determined by **a counterparty's listing decision** — which silently moves the revenue in and out of the s.103 ring-fence and the s.107 floor. **This needs a covenant in the term sheet** (§9, item 12). Non-public sites — workplace, condo/strata, fleet depot, employee-only parking — cannot be pulled in and are safe.

3.3 The s.21 agreement route

s.21(1): a registered creator may, *"before they have created any provisional compliance credits, enter into an agreement to create compliance credits for a compliance period"* with a person referred to in ss.98(1), 99(1), 101(1), 102(1) or 104(1). **s.21(2)** makes the agreement invalid unless signed by the authorized agents of each party and containing prescribed per-station content — for a CNO counterparty, the province of each station and whether it is intended primarily for private-dwelling, public or other use (s.21(2)(f)); for a site host, the province and the name of the CNO operating the platform (s.21(2)(g)(ii)). **s.22(1):** the agreement must be submitted to the Minister and no credits created under it until the **day after** submission; **s.22(2):** submit within the first **60 days** of a compliance period to earn from day one. **File by roughly 1 March or truncate the year.** (P-LEG)

Open reading risk, unresolved: s.21(1)'s *"before they have created any provisional compliance credits"* is not expressly qualified by "for that compliance period." On a harsh once-ever reading, a creator that has already created credits could never sign a new s.21 agreement — which would make rolling multi-year aggregation impossible after year one. s.106(6)(a) contemplates agreements entered *"at any time during the ongoing compliance period or the two compliance periods that ended most recently"*, which supports the per-period reading but does not settle it. No ECCC guidance found. **This is a live question for counsel and for ECCC (cfsnecp@ec.gc.ca) before any residential-first / commercial-later sequencing.** (P-LEG text; conclusion **UNVERIFIED**)

s.106(6) is a related trap: a creator whose s.21 agreement has lapsed and who is not carrying out a s.19(1)/s.20 activity, or who has not created credits for the two most recent periods, **cannot receive credits by transfer** — foreclosing the very purchase needed to cure a s.103(6) shortfall at the moment it would be needed.

s.106(1)–(2): only participants may hold or transfer credits, and only to other participants; each transfer request must state *"the price, if any, to be paid ... for each compliance credit."* Price confidentiality vis-à-vis the Crown is limited.

3.4 Is gross credit revenue spendable? – s.103

s.103(1) verbatim: a charging-network operator referred to in s.102(1), *"or a person with whom they have entered into an agreement under section 21, must not create compliance credits under section 102 during a compliance period unless **all of the revenue** that they receive from the transfer of compliance credits created under that section during all previous compliance periods is used within the time limit set out in subsection (3) for the purpose of carrying out, **in Canada**, either of the following activities: (a) expanding electric vehicle charging infrastructure, including charging stations and electricity distribution infrastructure that supports electric vehicle charging ...; or (b) reducing the cost of electric vehicle ownership through financial incentives to purchase or operate an electric vehicle."* (P-LEG)

Five things follow, and one of them is a correction to the research:

1. **It is 100% of revenue, not profit.** No deduction for verification, software, salaries or overhead.
2. **It reaches the distributor** whenever the distributor is the s.21 counterparty. It cannot be contracted away as against the Crown.
3. **It applies to all s.102 credits – residential AND public.** It does **not** apply to s.101 site-host credits. ("Revenue" appears only 14 times in the whole consolidation, confined to s.103, s.125, s.131(2)(b) and Schedule 16 – all s.102-facing. That negative is verified, not merely unsearched.)
4. **s.103(3)** – the deadline is *"no later than the second anniversary of the end of the compliance period during which the compliance credit is transferred."* **That is a 24-to-36 month runway depending on when in the period the transfer occurs**, not a flat "nearly three years." A January transfer gets ~36 months; a December transfer gets ~24 – which is the inherited "730 days," and that figure is the correct **floor**, not an error. *Operational lever: transferring early in a compliance period buys nearly a year of extra deployment runway at no cost.*
5. **s.103(4)–(8)** – the Minister **must** cancel an equivalent number of credits if revenue is not so used; if the account is short, the Minister sends a notice and the holder has **90 days after the notice is sent** to acquire replacements. That is a forced open-market repurchase, unhedged, at exactly the prices that make the business attractive. (Note the clock difference: s.103(6) runs from the day the notice is **sent**; the parallel s.160(3) excess-credit clock runs from **receipt**, and s.160(3)(b) additionally requires the holder to *request* cancellation within the 90 days.)

The correction, and it is the one that most changes the economics. The underlying research concluded that because s.103(1) (a) permits "expanding ... charging infrastructure, including charging stations," a distributor's inventory purchases qualify – so the obligation "ring-fences revenue rather than destroying margin" and should not be modelled as a haircut. **The regulation does not say that, and the verifier is right to reject it.** Infrastructure is expanded when stations are **deployed**, not when they are **stocked**. Three textual features cut against the benign reading: Schedule 16 requires *"a description of each of the activities"* funded; s.131(1) makes that description subject to third-party verification and s.148(2) to a reasonable-assurance CPA audit; and s.103(1) is **cumulative and forward-blocking** – failure stops the credit engine rather than merely fining it.

Defensible characterisation: s.102 credit revenue is RESTRICTED GROWTH CAPITAL. It can fund deployment of charging infrastructure in Canada or EV-purchase/operation incentives. It **cannot** fund operating expenses, salaries, debt service, or distributions to owners. Whether a distributor's inventory purchases count as "expanding EV charging infrastructure" is **unresolved on the face of the text** and would be tested by the s.131 verifier against the Schedule 16 activity description. Model s.102 revenue as ring-fenced and non-distributable; treat the COGS-offset reading as an **aggressive position requiring Canadian regulatory counsel**, not as a settled reason to drop the haircut.

Schedule 16, items 3–7 turn this into an audited annual ledger: credits transferred, total revenue, amounts spent on each of the two permitted activities, a description of each activity, revenue that *"has not yet been used,"* and unspent balances carried from preceding periods. The obligation and the filings **survive exit from the distribution deal**, because s.125(1)(b) reaches two compliance periods past the revenue. (P-LEG)

s.107 — *"The price paid for the transfer of a compliance credit that is created under subsection 102(1) must not be less than its fair market value."* It applies **only** to s.102(1) credits; s.101 credits have no floor. It blocks the obvious structure of transferring credits cheaply to a related entity to strip them out of the s.103 ring-fence. **"Fair market value" is not defined in s.1(1)** and no ECCC guidance on its determination for a bilateral or related-party transfer was found. (P-LEG / gap **UNVERIFIED**)

Whether the s.103 duty is joint or several between the CNO and its s.21 counterparty is unresolved — ss.103(2)–(8) say *"the charging-network operator or person"* throughout, disjunctively, with no allocation rule. **The regulation will not allocate this; the contract must** (§9, item 9).

3.5 The genuinely open question about 2031 and beyond

Two readings of the interaction between s.101(1) and s.102(1)(a) are open on the face of the text, and they change the terminal value of the business:

- **Strict reading:** s.102(1)(a) describes a private-dwelling station *"installed on or before December 31, 2030."* A residential charger installed 1 January 2031 is therefore **not** "referred to in subsection 102(1)" and is **not** excluded from s.101 — so it falls to the charging-site host route, with no deadline, no s.103 ring-fence and no s.107 floor. The same logic would apply to a residential charger the occupants do **not** own (retained title), which also escapes s.102(1)(a) on the French text.
- **Against it:** Schedule 3 item 11 limits site-host registration to *"a charging station other than a charging station described in sections 9 and 10 of this Schedule"*, and item 9 describes residential stations **descriptively** — *"intended primarily for use by the occupants of a private dwelling-place"* — with no ownership or date qualifier. Three other provisions (s.79(1), Schedule 11 item 6(c), s.21(2)(f)(ii)) likewise treat "residential" as a **use** category, not an ownership or vintage category. And the strict reading would render the 2030 install deadline and the 2035 sunset a nullity.

Unresolved. Grade: DERIVED / UNVERIFIED. Neither the research nor the verification could settle it, and no ECCC guidance was found. This is the **single highest-value question to put to ECCC and to Canadian regulatory counsel**, ahead of the s.21(1) sequencing question, because it determines whether the residential opportunity ends in 2035 or continues indefinitely under a different section. **Do not plan on the favourable reading. Do ask.**

4. The timeline collision

This gets its own treatment because it is the risk most likely to be missed and it caps the opportunity independently of price.

4.1 The two clocks

Clock A — the product. The deck describes a **24-month development programme** from kickoff to commercial launch: requirements 2 months, alpha prototype 4, beta software 8, testing/pilot 4, mass production/launch 6. The EOI is dated **2026-03-20**. (P-DECK)

That puts first retail units at **Q1–Q2 2028 at the earliest**, and only if the OVIN grant lands and nothing slips. The deck is a working draft — slides 20–24 still carry editorial notes ("Don't Need - combine with slide 3", "KEEP HIGHLEVEL - convert to gantt chart") — and the OCI ask itself is stated as \$600,000 on slide 10 and \$1,000,000 on slide 24, with the project budget stated as \$3,920,021 (slide 10) and \$3,930,000 (slide 24), while slide 24's own \$2,860,000 + \$1,000,000 = \$3,860,000 reconciles to neither. A programme whose funding ask is internally inconsistent by 67% has not been through a gate. **Treat Q2 2028 as optimistic.**

Clock B — the regulation. s.102(1)(a): the station must be *"installed on or before December 31, 2030."* (P-LEG)

4.2 What is actually left

	QUARTERS OF QUALIFYING INSTALLS	YEARS
From Q1 2028 (best case)	12	3.00
From Q2 2028 (central)	11	2.75
From Q4 2028 (one quarter of slip)	9	2.25

(DERIVED)

The 2030 deadline *appears* to give ~4.4 years from today. **A 2028 launch leaves roughly 2.75.** And the earning tail shortens with it: a unit installed in 2026 earns across 10 compliance periods; a 2028 unit across 8; a 2030 unit across 6. On the Ontario Schedule 6 basis that is **40.29 → 31.89 → 23.77 lifetime credits**, a 41% erosion in per-unit lifetime value between a 2026 and a 2030 install. (DERIVED, §2.4)

4.3 How many units can actually be installed before the cliff

The deck gives two volume points: **Year 1 = 5,000 units / \$2.745M gross** (which is exactly \$549/unit, confirming the deck's revenue model runs on the \$549 figure) and **Year 5 = \$10M+ annual revenue → 10,000,000 ÷ 549 = 18,215 units.** (P-DECK / DERIVED)

My assumption, stated: a geometric ramp between those two points, i.e. **38.2% CAGR** — 5,000 / 6,908 / 9,543 / 13,185 / 18,215. The deck gives no intermediate years; this interpolation is **DERIVED and mine**, not the deck's.

Cumulative units installed **globally** by 2030-12-31:

Q2-2028 launch:	Y1 5,000 + Y2 6,908 + half of Y3 4,772	= 16,679 units
Q1-2028 launch:	Y1 5,000 + Y2 6,908 + Y3 9,543	= 21,451 units

Canada's share of that global volume is not stated in the deck. **My assumption, stated:** 5–10%, roughly Canada's share of North American consumer-electronics volume.

Canada @ 5%:	834 – 1,073 units installed before the cliff
Canada @ 10%:	1,668 – 2,145 units installed before the cliff

(DERIVED)

4.4 The lifetime credit value of that fleet, against what the deck claims

Cohort-weighted, Ontario basis, 3,500 kWh/yr, Schedule 6 (DERIVED):

CANADIAN SHARE OF THE DECK'S GLOBAL RAMP	UNITS	LIFETIME CREDITS	GROSS @ \$200	GROSS @ \$300	GROSS @ \$400
5%	~830–1,070	~22,000	\$4.4M	\$6.7M	\$8.9M
10%	~1,670–2,145	~44,000	\$8.9M	\$13.3M	\$17.7M

Every dollar of that is **gross**, and every dollar of it is subject in full to the s.103 ring-fence — it is not margin, and on the honest reading of s.103 it is not even certainly a COGS offset (§3.4).

Now the deck's own Canadian claim: **"5% market capture = \$70M."** (P-DECK)

\$70,000,000 ÷ \$549/unit	= 127,505 Canadian units
\$70,000,000 ÷ \$969/unit	= 72,239 Canadian units

Against the 834–2,145 units the 2030 window permits at the deck's own ramp, the \$70M Canadian target requires **34× to 87× more installed units than the CFR-eligible window can hold.** (DERIVED)

4.5 The conclusion, stated plainly

The 2030 install deadline structurally caps the CFR-funded residential opportunity at roughly 1–3% of the deck's own stated Canadian ambition ($834 \div 72,239 = 1.15\%$; $2,145 \div 72,239 = 2.97\%$). The deck's \$70M Canadian claim is not a CFR-funded claim; it is a claim about a market that keeps buying chargers long after the residential credit pathway has stopped accepting new hardware. Those are two different businesses, and the business case in the prompt only works for the first one. Every unit sold after 2030-12-31 is a plain hardware sale into a market whose incumbents give the hardware away.

Two secondary collisions in the same window:

- **Quebec's Écorecharge normative framework ends 2028-03-31** (P-GOV) — the quarter the product is scheduled to ship. The rebate that does the most to make a paid charger viable in Canada may expire on the launch date. This is a risk on the current instrument, not a certainty; Quebec renewed Roulez vert into Écorecharge, and could renew again.
- **BC's rebate funding is "available on a first-come first-served basis while funding lasts"** (P-GOV). "Status: Open" in August 2026 is not a commitment for 2028.

5. \$969 tested

5.1 Against the retail comparison set

Covered in §1.1. Summary: \$969 sits at the top of the 48A band, 1.49× a feature-equivalent Canadian-made 48A unit, 1.39× a Canadian-made 50A unit tied to a real public network, and 0.65× the entire Canadian residential ceiling. The **only** feature steps that command more than \$969 in Canada are 80A (Grizzl-E \$1,199, Autel \$1,440, FLO X8 \$1,499) and a second port (Grizzl-E Duo \$1,199.99). \$969 buys neither.

5.2 Against the free-hardware programmes

PROGRAMME	HARDWARE COST TO CONSUMER	PAYOUT	NOTE
Grizzl-E Club (United Chargers, ON)	\$0 + \$100 refundable deposit + shipping	3→10 ¢/kWh tiered, +5 ¢ "Thanksgiving Bonus" from 2026-10-01 → headline 15 ¢	Lifetime warranty; 21,573 members; existing Grizzl-E owners can convert with no deposit at all , against a claimed 300,000+ installed base
SWTCH Home Charging	\$0 + \$300 refundable deposit + \$30 shipping	3 ¢ to 1,500 kWh then 11 ¢ from 2026-09-01	Or buy at \$499
ChargeLab Rewards	\$0 — uses the charger you already own	10 ¢/kWh , quarterly, no tiers	Requires OCPP 1.6+; Autel, Wallbox, Siemens, SWTCH/Joint, Grizzl-E Smart named
Pion Power GreenMiles	Requires Pion hardware	10 ¢/kWh equivalent	Closed to third-party hardware

(All S-TRADE, observed 2026-08-25.)

Payback arithmetic, by province and credit price. The right question is not "how long does \$969 take to pay back" — it is "how much must Nanoleaf out-pay a free rival, and can the credit stream afford it."

Gross credit revenue available per kWh (the hard ceiling on any payout), 2026, Schedule 6:

	\$157/CR	\$200/CR	\$300/CR	\$400/CR
Quebec	19.5 ¢	24.8 ¢	37.2 ¢	49.6 ¢
Ontario	19.0 ¢	24.2 ¢	36.3 ¢	48.3 ¢
British Columbia	19.1 ¢	24.4 ¢	36.6 ¢	48.8 ¢
Alberta	7.4 ¢	9.5 ¢	14.2 ¢	19.0 ¢
Nova Scotia	7.1 ¢	9.1 ¢	13.6 ¢	18.1 ¢
Saskatchewan	6.4 ¢	8.1 ¢	12.2 ¢	16.2 ¢

What the incumbents' payouts consume of that Ontario gross (same basis: 2026 CI_ref, Schedule 6 CI_e 14):

RATE	@ \$157	@ \$200	@ \$300	@ \$400
ChargeLab 10 ¢	52.7%	41.4%	27.6%	20.7%
SWTCH 11 ¢	58.0%	45.5%	30.3%	22.8%
Grizzl-E headline 15 ¢	79.0%	62.1%	41.4%	31.0%

(DERIVED)

And the premium \$969 must earn:

LOAD ASSUMPTION	3-YR PAYBACK	5-YR PAYBACK	10-YR PAYBACK
3,500 kWh/yr	+9.2 ¢/kWh	+5.5 ¢/kWh	+2.8 ¢/kWh
2,455 kWh/yr	+13.2 ¢/kWh	+7.9 ¢/kWh	+3.9 ¢/kWh

Add +5.5 ¢ to Grizzl-E's 15 ¢ and you must pay **20.5 ¢/kWh**, which is **108% of the Ontario gross at \$157/credit**, 85% at \$200, 56% at \$300. In Alberta, Nova Scotia or Saskatchewan a 20.5 ¢ payout **exceeds the entire gross credit stream at every credit price tested**. (DERIVED)

Verdict: there is no province and no credit price at which \$969 is recoverable by the consumer against a free alternative.

The 10-year figures are the only ones that look tolerable, and a 10-year payback on a consumer appliance whose default warranty is 3 years is not a consumer proposition.

5.3 Can provincial rebates close the gap?

Only two live provincial home-charger rebates exist in Canada, and **only one of them contains any price signal at all**.

Quebec — Écorecharge (P-GOV, *Cadre normatif*, in effect 2026-03-17, ends 2028-03-31):

- Flat **\$600** grant.
- **Hard price floor:** "the actual amount you paid for your charging station must be at least \$600, before applicable taxes." Below \$600 paid, the grant is **zero**.
- **Promotions void it:** "If you have benefited from a promotion — for example, from your dealer, automaker, the charging station manufacturer, or your municipality — that partially covered your acquisition costs, you may not be eligible." A free charger from a rewards programme gets **nothing**.
- Charger only. Installation, delivery, accessories, network fees, extended warranties and taxes are all **ineligible**.
- **From 2026-04-01 only connected chargers on the eligible-models list qualify.** Of 371 listed L2 SKUs, **364 are already connected** — 3 manufacturers and 7 SKUs are affected (Arani, TechnoVE, and Elmec's EVduty-50, which needs its Smart option). **This is table stakes, not a moat.** (DERIVED from the official XLSX)

- **Nanoleaf is not on the list.** Listing is a pre-launch task, but a **sole Canadian distributor has standing to file it directly** — *"Only charging station distributors and manufacturers may request to have a model added."* Requires an attestation of certification from an accredited body, technical data sheet, photograph showing the certification seal valid for Canada, and images. **SPE-1000 field-evaluation approvals are expressly excluded.**
- Further gates the buyer must clear: the applicant must **already own and have registered an EV in Quebec**; one charger **per vehicle**; building of **one to two dwelling units**; RBQ-licensed electrician; and **no proxy filing** — *"Le demandeur ne peut se faire représenter pour la présentation et le traitement de sa demande."* A distributor cannot run the paperwork for the customer.

British Columbia — CleanBC Go Electric (P-GOV, Program Guide 15 July 2026):

- **50% of eligible costs to a maximum of \$350** (75% to \$750 for Indigenous individuals resident in BC).
- **Eligible costs include installation, permits, electrical design and EV power-management devices** — not just the charger. Since installation by a licensed electrician is required and routinely exceeds \$500, **the \$350 cap binds at essentially any charger price.**
- **Therefore BC is a flat \$350 that discriminates between no price points whatsoever.** It carries **no upper price signal**, and the earlier research conclusion that BC's 50%/\$350 structure implies a \$700 charger-price ceiling was verified as **materially wrong.**
- Equipment gate is certification-based: L2, SAE J1772 **or** SAE J3400/NACS connector, certified by cETL/cQPS/CSA/cUL/ULC, purchased in Canada, new, permanently installed. **No connectivity requirement for single-family.** Tesla-manufactured chargers are excluded. BC Hydro *does* publish a rebate-eligible-charger database (roughly 85 manufacturers) — whether it is a hard gate or advisory is unresolved.
- Home must be constructed at least 6 months before install (stated on the web page, absent from the Guide — confirm).

Everywhere else: nothing. Ontario, Alberta, Manitoba and Saskatchewan run no province-wide L2 home-charger rebate. Nova Scotia's ended May 2025; New Brunswick's ended 2025-06-30. PEI remains at \$750 + up to \$750 for a panel upgrade, reportedly winding down end-2026. Federally, NRCan's ZEVIP funds public, workplace, fleet and MURB charging but **not single-family homes.** (All **S-TRADE** — no responsible provincial department page was reached for any of these negatives, and Ontario, the largest market, rests entirely on aggregators.)

5.4 The full price ladder, with the cliff edges visible

Out-of-pocket to the consumer, **tax included** (Quebec GST 5% + QST 9.975% = 14.975%; BC GST 5% + PST 7% = 12%; Ontario HST 13%). BC figures credit the flat \$350 against the charger and **exclude installation, which is extra and generates the eligibility:**

MSRP	QUEBEC REBATE	QC OUT-OF-POCKET	BC OUT-OF-POCKET (CHARGER ONLY)	ONTARIO (NO REBATE)	POSITION IN THE FIELD
\$549 (deck, if CAD)	NONE — below the \$600 floor	\$631.21	\$264.88	\$620.37	At Grizzl-E Classic Connect \$499.99; competitive on paper
\$600	\$600	\$89.85	\$322.00	\$678.00	The one price where a paid charger nearly matches free, in Quebec only
\$649	\$600	\$146.19	\$376.88	\$733.37	At Grizzl-E Ultimate 48A \$649.99 — parity, not premium
\$751 (\$549 USD)	\$600	\$263.46	\$491.12	\$848.63	Above FLO X3 \$699 and ChargePoint \$709, below FLO X6 \$899
\$957 (\$700 USD @ 1.3678)	\$600	\$500.31	\$721.84	\$1,081.41	Top of the 48A band, at Wattt Home Gen 2 \$931–948

MSRP	QUEBEC REBATE	QC OUT-OF-POCKET	BC OUT-OF-POCKET (CHARGER ONLY)	ONTARIO (NO REBATE)	POSITION IN THE FIELD
\$969 (\$700 USD @ 1.384)	\$600	\$514.11	\$735.28	\$1,094.97	Inside the deck's own "\$700–\$1,200 expensive" band

(DERIVED)

The premium each price point must earn over a free rival, for a 5-year consumer payback (DERIVED):

MSRP	@ 3,500 KWH/YR	@ 2,455 KWH/YR
\$549	+3.1 ¢/kWh	+4.5 ¢/kWh
\$751	+4.3 ¢/kWh	+6.1 ¢/kWh
\$969	+5.5 ¢/kWh	+7.9 ¢/kWh

Note what this says about the deck's own price: **even \$549 requires a permanent 3.1 ¢/kWh premium over a rival giving the hardware away at 15 ¢.** That is a 21% higher payout rate, forever, funded out of a gross stream of 36.3 ¢/kWh at \$300/credit and 19.0 ¢ at \$157. The affordability problem is not confined to \$969; \$969 simply makes it unarguable.

Three cliff edges, and one of them is counterintuitive:

1. **\$549 CAD falls BELOW Quebec's \$600 floor and earns zero rebate.** In Quebec the cheaper price is **worse for the buyer than \$969**: \$631.21 out of pocket at \$549 versus \$514.11 at \$969. The deck's own headline price is the single worst price point in the ladder for Canada's second-largest EV market. If the price is set in CAD at \$549, that is an unforced error worth \$600 per unit in Quebec.
2. **\$600 CAD is the only price in the entire ladder that competes with free** — \$89.85 out of pocket in Quebec, against a \$100–\$300 refundable deposit plus \$30 shipping for a Grizzl-E or SWTCH unit. It is a genuine competitive position, and it exists in **one province**, for **buyers who already own a registered EV**, in **1–2 dwelling-unit buildings**, on an instrument that **expires 2028-03-31**.
3. **Above ~\$700 the rebates stop doing work.** Quebec's flat \$600 covers 100% of a \$600 charger, 92% of \$649, 80% of \$751, 62% of \$969 and 40% of \$1,500. BC's flat \$350 covers a constant dollar amount at every price. Neither scales. Every dollar above \$700 is borne 100% by the buyer.

Answer to "identify the price at which this deal DOES work":

- **As a retail SKU: \$600–\$650 CAD, and only in Quebec, and only until 2028-03-31.** Outside Quebec, no retail price works, because the competing effective price is \$0 and the rebate that would close the gap does not exist.
- **As a landed cost inside a credit business: ≤ ~\$250 CAD (\$8).** At that number the hardware is 2.6–5.0% of an Ontario 2028-install lifetime credit stream and the giveaway model is affordable.
- **\$969 works at neither.** It is 1.5× too high as retail and ~3.9× too high as a landed cost.

6. The refundable-deposit model

Revised 2026-08-26. The structure is a **\$299 fully refundable security deposit**, returned once the customer has charged 1,500 kWh.

This lines up. At \$299 against a 1,500 kWh trigger the offer sits inside the market band, returns the customer's money in about five months, and is covered by credit revenue before it comes due.

6.1 The market

PROGRAMME	CONSUMER FRONTS	VS PROPOSED	REFUND TRIGGER
ChargeLab Rewards	\$0	—	No hardware; pays on the box the customer already owns
Grizzl-E Club	\$100	2.99× smaller	Vests at 36 months; charger "always remains our property"
EcoCharge (BC)	\$199	1.50× smaller	1,500 kWh
Proposed — 12388588 Canada Inc.	\$299	—	1,500 kWh
Clearshot Labs	\$300	1.00× larger	1,500 kWh within 12 months
SWTCH Home	\$330	1.10× larger	\$300 + \$30 shipping; ~1,500 kWh
DashSharing Ultra	\$599	2.00× larger	2,500 kWh — the market ceiling

(S-TRADE, programme terms as published 2026-08-26.)

\$299 is level with Clearshot, below SWTCH, and **half the market ceiling**. It refunds against the same 1,500 kWh milestone three of the five competitors use.

6.2 The wait matters more than the amount

A deposit is not free to the person who pays it — but a kWh trigger makes the wait short, and the carrying cost follows the wait, not the headline number.

PROGRAMME	DEPOSIT	RETURNED WHEN	WAIT	CARRYING COST @ 4%
Grizzl-E Club	\$100	36 months elapse	36.0 mo	\$12.49
Proposed	\$299	1,500 kWh charged	5.1 mo	\$5.07
DashSharing Ultra	\$599	2,500 kWh charged	8.6 mo	\$17.09

At a typical 3,500 kWh household the customer reaches 1,500 kWh in **5.1 months**, and their real cost is **\$5.07 — 41% of what a Grizzl-E member gives up**, despite a deposit three times the size, because Grizzl-E holds the money for three years. (DERIVED)

6.3 Take it tax-free

"A deposit is an amount given by a recipient as **security for the performance of an obligation** by the recipient." (para 5)

"If the deposit amount is refundable and is refunded by the supplier to the recipient, **there are no tax consequences**." (para 8)

— CRA GST/HST Memorandum 300-6-8, *Deposits* (P-GOV, verified verbatim)

Under ETA s.168(9) a deposit is not consideration until the supplier applies it. **Do not add HST — \$299 is \$299**, which is how SWTCH treats its own deposit. Charge it in error and **ETA s.232 permits, but does not require**, a correction, and only within **two years** (both verified verbatim).

Tax does not disappear; it moves to forfeiture. ETA s.182(1) deems a forfeited amount to *already include* tax at $(A/B) \times C$, where B is 113% in Ontario — so a forfeited \$299 is **\$264.60 of consideration plus \$34.40 of HST the operator must remit**. Price the forfeiture path accordingly.

None of this is tax advice. Have a tax advisor confirm the instrument before it is offered to consumers.

6.4 The money side, and the constraint on it

At an Ontario unit's 4.26 credits/yr and \$320/credit, gross credit revenue is \$1,363/yr:

credit revenue covers the \$299 at	month 2.6
customer reaches 1,500 kWh at	month 5.1
gross credit revenue earned by that point	\$584

(DERIVED)

The refund is funded roughly twice over before it comes due.

But s.103(1) forbids funding it out of credit revenue. The provision is a precondition on credit creation itself: an operator "must not create compliance credits under section 102 during a compliance period unless all of the revenue that they receive from the transfer of compliance credits ... is used ... for the purpose of carrying out, in Canada" either expanding EV charging infrastructure or EV-ownership incentives. (P-LEG, verified verbatim.) Refunding a deposit is neither — it extinguishes a liability and carries out no activity.

So hold the deposit as customer money on the balance sheet, and let credit revenue fund the hardware, which *is* squarely inside s.103(1)(a).

6.5 The thing worth more than the deposit

« par une borne de recharge **dont sont propriétaires les occupants d'un logement privé** et qui est destinée principalement à être utilisée par eux »

– DORS/2022-140, art. 102(1)a (P-LEG, verified line-level)

The English admits a looser reading — "owned [by anyone] and intended primarily for use by the occupants." Both versions are equally authoritative; where one is ambiguous and the other clear, the clear version supplies the shared meaning (*R. v. Daoust*, 2004 SCC 6, paras 26–29; Interpretation Act s.8.1). **The occupants must own the charger.** And because s.102(1) tests its conditions *during* each compliance period, title passing at the refund does not retroactively qualify the months before it.

Therefore: title passes to the customer at delivery, and the \$299 is pure security. Grizzl-E's published terms state the charger "always remains our property." If this reading is right, the retained-title programmes carry a defect and yours is the compliant structure — the single most valuable thing available in this proposal.

Pair it with an **unconditional warranty**. Grizzl-E's "lifetime" cover requires 4–6 charging sessions a month with the company as "sole arbiter," caps replacements at two per rolling year, ships refurbished units after 60 days, and disables charging after ten sessions offline.

6.6 Still open

- **Provincial consumer-protection rules** on holding refundable consumer deposits at scale. Not researched. (UNVERIFIED)
 - **Whether the s.101 site-host route survives Schedule 3.** English item 11 appears to close it for a distributor-owned residential charger while the French opens it; the English schedule abbreviates in items 9 *and* 10 in ways the operative s.102(1) does not, which points to shared meaning resolving in favour of the French. A genuine textual conflict — put it to counsel. (P-LEG both versions verified; conclusion DERIVED.)
-

7. The reconciliation – free hardware and a \$9,600 credit stream are the same fact

Two research findings look contradictory:

- "The effective consumer price for a CFR-participating residential L2 charger in Canada is already \$0."
- "An Ontario home throws off ~~40 credits~~ (\$12,200 gross at \$300/credit) over the 2026–2035 life, which dwarfs \$969."

Both are true, and their conjunction is the strategic answer. Take the Ontario 2028-install case (the realistic one for this product) on the Schedule 6 basis:

	\$157/CR	\$200/CR	\$300/CR	\$400/CR
Lifetime gross credit revenue, 31.89 credits	\$5,007	\$6,379	\$9,568	\$12,758
Ratio to a \$969 retail price	5.2×	6.6×	9.9×	13.2×
Ratio to a ~\$250 landed cost	20×	26×	38×	51×
Operator payback on \$969 from gross credits alone	1.51 yr	1.18 yr	0.79 yr	0.59 yr

(DERIVED)

If the lifetime credit stream is 5–13× the hardware, then whoever captures the credit stream can rationally give the hardware away – and will. That is not a marketing choice; it is arithmetic. And it explains Grizzl-E and SWTCH exactly.

7.1 The \$0 floor cannot be waited out

The most important correction in the whole research packet lands here. One stream concluded that Grizzl-E is passing ~\$229.56 per tonne through to homeowners and therefore that the \$0 model *"is contingent on a high credit price."* **That is refuted by the regulation's own formula.**

The refutation: for Grizzl-E's published counter of 4,469,202 kg CO₂ to be *credit*-denominated, then even at the statutory **floor** election R_{ee} = 2.5 (which minimises credits and therefore maximises implied kWh), CI_{ref} 85.3 and Ontario CI_e 14 give $199.25 \times 3.6 \div 10^6 = 7.173 \times 10^{-4}$ credits/kWh, i.e. 1 credit per 1,394 kWh. That would require 6,230,590 kWh of delivered energy, forcing an average payout of $\$1,025,959.75 \div 6,230,590 = \mathbf{16.5\text{ ¢/kWh}}$ – against a published maximum on 2026-08-25 of 11 ¢/kWh (10 ¢ top tier + 1 ¢ referral). **16.5 ¢ is 50% above the ceiling, so the counter cannot be CFR credits.** Because R_{ee} = 2.5 is the floor election, this is *a fortiori*: any higher R_{ee} only strengthens it. (DERIVED)

Corrected pass-through, with the arithmetic: at 1,394 kWh per credit, **11 ¢/kWh × 1,394 = \$153.34/credit** (the absolute ceiling – every member simultaneously at top tier plus full referral, which is impossible), and **4 ¢/kWh × 1,394 = \$55.76/credit** at a realistic blended rate. So against a \$400 credit Grizzl-E is passing through **at most 38% and realistically ~14%**, retaining 62–86%. The refutation also holds *a fortiori* on the province mix: at the 2.5 floor election Alberta, Saskatchewan, Nova Scotia and Nunavut generate **zero** credits, so attributing the CO₂ counter to clean-grid provinces only makes the implied kWh **larger**, never smaller. **The giveaway model has enormous headroom and is not fragile to the credit price.**

(Two caveats, stated: after 2026-10-01 the published ceiling rises to ~16 ¢/kWh and this bound goes thin; and if any part of the rewards total is non-kWh bonus, implied Q falls and the bound loosens.)

7.2 And it is compelled, not discretionary

s.103(1) makes the giveaway the statutory discharge of the reinvestment obligation. Free hardware maps onto s.103(1)(a) ("expanding electric vehicle charging infrastructure, including charging stations"); homeowner cash rewards map onto s.103(1)(b) ("financial incentives to purchase or operate an electric vehicle"). s.103(4) makes cancellation **mandatory** if the money is

not spent. (P-LEG)

The \$0 price is not a promotion with a budget that runs down. It is compelled spending for as long as credits are created and transferred. There is no "outlast the subsidy war" strategy.

7.3 What that means commercially

1. **Hardware price is nearly irrelevant to the end customer.** Every serious residential competitor has already moved the consumer price to zero and is competing on ¢/kWh, not on the box.
2. **A distributor competing on hardware margin is competing in the wrong market.** The margin pool it is fighting over is 2–20% of the value in the transaction.
3. **Data ownership under s.1(1) is the only thing that matters commercially.** It determines who can register as CNO, who creates the credit, and therefore who holds the 80–98%. It is a **contractual fact about Nanoleaf's platform**, not a regulatory one — which means it is negotiable, and it is the only term in the whole deal worth walking away over.
4. **This sharpens the channel recommendation.** If the residential credit position cannot be obtained (§3.1, likely), then the only channel where a distributor can hold a credit position *in its own right* is **non-public light-commercial under s.101 with retained title** — where the distributor is the charging-site host, there is no s.103 ring-fence, no 2030 deadline, no s.107 floor, and s.79(1) permits pursuing a below-grid-average CI. That is §7's ranked #1.

8. Channels — ranked

8.0 The DTC-vs-B2B verdict

B2B wins, and the deciding reason is not margin — it is that the only channel in Canada where a distributor can hold a CFR credit position *in its own right* is a B2B one. Non-public light-commercial with retained title makes the distributor the s.101 charging-site host and the registered creator, with no s.103 ring-fence, no 2030 install deadline and no s.107 floor. DTC and marketplace deliver hardware gross margin — genuinely the best margin per unit in the stack — into a residential market that clears at **\$0**, and they attach **no** credit revenue unless Nanoleaf grants the s.1(1) data-ownership position, which is walk-away term #1 and is unlikely to be given. **Rank: B2B light-commercial first, installer/dealer second, DTC third.** DTC is worth keeping as a margin-and-brand channel and as the vehicle for the Quebec eligible-models listing the distributor can file in its own name; it is not the business.

Ranking axes: **order size, sales cycle, reachable volume, who holds inventory, regulatory gating, how credit revenue attaches**, and the assets the deck already claims (6,500 physical NA stores of Nanoleaf shelf space, a named "Home Depot Retail Channel Manager" role, existing DTC and top-10 NA marketplaces, a dealer/installer network to be built) (P-DECK).

Order size is DERIVED — it is a property of the transaction, not of the supply contract, so it is estimable without an MOQ. **Capital intensity is marked PENDING MOQ throughout.** The deck contains **no landed cost, no MOQ, no stocking terms and no draft term sheet**, and there are no embedded workbooks. Every capital-intensity cell below is a shape, not a number.

#	CHANNEL	TYPICAL ORDER SIZE (DERIVED)	SALES CYCLE	REACHABLE VOLUME (CANADA, PRE-2031)	WHO HOLDS INVENTORY	REGULATORY GATING	HOW CREDIT REVENUE ATTACHES	CAPITAL INTENSITY
1	Non-public light-commercial, retained title — workplace, condo/strata common areas, fleet depots, small business	2–8 units per site , occasionally 20+ for a fleet depot	3–9 months per site; 6–18 months for condo boards	Low unit count, high value per site; not capped by the 2030 deadline	Distributor (that is the point — retained title is what makes it the s.101 site host)	s.101(1) + s.1(1) "charging-site host"; Schedule 11 item 5(b)(i) GPS + civic address; s.79(1) CI election available; s.130/141(2) (c)/148(3)/150(a)/123(1) if a custom CI is pursued	Directly — distributor is the registered creator in its own right. NO s.103 ring-fence, NO 2030 deadline, NO s.107 floor.	High — hardware on the distributor's balance sheet, plus install. PENDING MOQ
2	Installer / electrical-contractor dealer network	10–50 units per stocking order	1–3 months to sign a dealer; then transactional	Medium–high; the deck already plans "a dealer and installer network"	Distributor stocks; dealer buys	CSA/cUL certification (Rule 2-024); Quebec RBQ licence and no SPE-1000 field evaluation ; BC licensed electrician, DIY waiver available for single-family if inspected	Indirectly — only if the distributor also holds the credit position; otherwise none	Medium–high. PENDING MOQ
3	DTC (own e-commerce)	1 unit	Immediate	Low absolute volume; highest gross margin per unit	Distributor	Quebec eligible-models listing (distributor can file directly); Quebec forbids proxy rebate filing ; neither rebate is assignable at point of sale — customer finances 100% up front	None unless the distributor is the CNO	Medium — inventory + fulfilment, no channel float. PENDING MOQ
4	Marketplace (Amazon.ca and top-10 NA marketplaces — deck claims these already)	1 unit	Immediate	High reach, low differentiation, brutal price comparison against a \$0 field	Distributor (or FBA)	Same as DTC	None	Medium. Referral-fee rate UNVERIFIED

#	CHANNEL	TYPICAL ORDER SIZE (DERIVED)	SALES CYCLE	REACHABLE VOLUME (CANADA, PRE-2031)	WHO HOLDS INVENTORY	REGULATORY GATING	HOW CREDIT REVENUE ATTACHES	CAPITAL INTENSITY
5	Big-box retail (Home Depot, Best Buy, Canadian Tire) — deck names a Home Depot Retail Channel Manager and 6,500 NA stores	100–1,000+ units per PO	9–18 months to a planogram slot; annual line reviews	Highest theoretical volume	Retailer, but with markdown/co-op/return exposure back to the vendor	Certification; bilingual labelling (CPLA); Quebec Charter of the French Language — product markings, packaging, labels and promotional material in French, French at least as prominent, since 2025-06-01	None	Highest — slotting, co-op/MDF, markdown reserves, returns. PENDING MOQ
6	Two-step electrical distribution (Nedco, Guillevin, Westburne)	20–200 units per branch replenishment	6–12 months to a line card	Medium; reaches contractors at scale	Distributor sells in, they stock	Certification; contractor channel expectations	None	Medium — but the thinnest margin of any channel (§8)
7	Builder / developer (EV-ready new construction)	Nominally 50–500 stalls, but the order is conduit and receptacles, not chargers	12–24 months	Largely a mirage for a charger vendor	n/a	BC's model bylaw defines the requirement as an energized outlet , not equipment; BC's home rebate excludes homes constructed <6 months before install	None	Low, and low return
8	Utility / aggregator programme (route volume to ChargeLab, SWTCH, Grizzly-E or a utility)	500–5,000+ units per programme commitment	3–6 months to onboard hardware	Potentially the highest, and the fastest	Whoever runs the programme	OCP 1.6+ is the hard gate; s.1(1) connectivity; s.23(3) exclusivity	To the aggregator, not to you. Zero credit exposure and zero credit revenue	Lowest — but it concedes the entire thesis

8.1 What this ranking says

#1 is the recommendation, and it is not the deal in the prompt. Non-public light-commercial with retained title is the only channel where a Canadian distributor can hold a CFR credit position in its own right without needing Nanoleaf to grant the s.1(1) data-ownership position — and it is the only route that escapes the s.103 ring-fence, the 2030 install deadline and the s.107 fair-market-value floor simultaneously. It is capital-heavy and slow, and it will not consume 5,000 units a year. It is, however, a business.

#5 is where the deck's assets point and where the least value is. 6,500 stores and a Home Depot channel manager are real assets — for selling a \$549 charger at volume, in a market that does not exist in Canada at \$969. They contribute nothing to the credit position.

#8 is the honest fallback if the credit position cannot be obtained. Route volume to ChargeLab (the only published Canadian programme that onboards third-party OCPP hardware), take a normal hardware margin, and stop calling it a CFR-funded business case. That is a distributorship, and it needs a landed cost near \$250 and an MSRP near \$649 to work at all.

Capital intensity cannot be ranked without MOQ. The ranking above orders the channels on everything else. Once a landed cost and an MOQ exist, §8 converts directly into a capital requirement: (MOQ × landed cost) + (channel float × days sales outstanding) + certification + first-year verification.

9. Unit economics model — landed cost as a variable

9.1 The model

Let **L** = landed cost per unit (FOB + freight + duty/surtax + customs brokerage + inbound), **P** = retail price, **W** = the distributor's net realised revenue per unit in a given channel, **m** = the distributor's target gross margin.

$$W = f(\text{channel}, P)$$
$$\text{Distributor gross margin} = (W - L) / W$$
$$\text{Break-even landed cost} = L_{\text{max}} = W$$
$$\text{Landed cost at target } m = L(m) = W \times (1 - m)$$

Channel revenue functions — my assumptions, stated (DERIVED, not verified against any Nanoleaf term sheet):

CHANNEL	W AS A FUNCTION OF P	ASSUMPTION
DTC (own e-comm)	$P \times 0.92 - \$30$	3% payment processing, 5% returns/promo reserve, \$30 pick/pack/ship
Marketplace (Amazon.ca)	$P \times 0.80 - \$25$	~15% referral, 5% returns, \$25 fulfilment. Referral rate UNVERIFIED
Installer / dealer direct	$P \times 0.68$	32% dealer discount off MSRP
Big-box retail	$P \times 0.62 \times 0.95$	38% retailer margin, 5% co-op/MDF/markdown reserve
Two-step electrical	$P \times 0.55$	Distributor sells to contractor at 45% off list

9.2 The plausible landed-cost band

The deck gives no landed cost. But it gives a **\$549 MSRP**, and a \$549 MSRP built for retail distribution constrains the landed cost, because the retail stack has to fit inside it. For a BOM-heavy hardware good (copper, contactor, GFCI/CCID, enclosure, 7.5 m TPE cable), consumer-electronics landed cost typically runs **40–50% of MSRP**, versus 25–35% for accessories:

$$\begin{array}{lll} \$549 \times 0.30 = \$165 & \$549 \times 0.40 = \$220 & \\ \$549 \times 0.35 = \$192 & \$549 \times 0.45 = \$247 & \$549 \times 0.50 = \$274 \end{array}$$

Working assumption: landed cost ≈ \$220–\$275 CAD, centred on \$250. (DERIVED. This is my estimate from ordinary CE margin structure, not a figure from any source.)

This has a negotiating consequence. The bill of materials was fixed at design time. A 27.5% MSRP increase from \$549 to \$700 USD, arriving after the grant application was written, is far more likely to be **margin** than **cost** — the BOM did not change between March 2026 and today. The alternative explanation is a tariff or surtax event on Chinese-origin EV-adjacent goods, which would be a genuine cost pass-through. **Which of the two it is determines whether \$969 is negotiable.** Ask directly; the answer is a term-sheet input, not a mystery.

9.3 Break-even landed cost, by channel, at each price point

Break-even landed cost (L_max) is where distributor gross margin is zero. L@25% and L@35% are the landed costs that deliver those gross margins.

At MSRP \$549 CAD (the deck's price):

CHANNEL	W (NET REVENUE)	BREAK-EVEN L	L @ 25% GM	L @ 35% GM
DTC	\$475.08	\$475.08	\$356.31	\$308.80
Marketplace	\$414.20	\$414.20	\$310.65	\$269.23
Installer/dealer	\$373.32	\$373.32	\$279.99	\$242.66
Big-box retail	\$323.36	\$323.36	\$242.52	\$210.18
Two-step electrical	\$301.95	\$301.95	\$226.46	\$196.27

At MSRP \$751 CAD (\$549 USD):

CHANNEL	W	BREAK-EVEN L	L @ 25% GM	L @ 35% GM
DTC	\$660.92	\$660.92	\$495.69	\$429.60
Marketplace	\$575.80	\$575.80	\$431.85	\$374.27
Installer/dealer	\$510.68	\$510.68	\$383.01	\$331.94
Big-box retail	\$442.34	\$442.34	\$331.75	\$287.52
Two-step electrical	\$413.05	\$413.05	\$309.79	\$268.48

At MSRP \$969 CAD (\$700 USD — the actual price):

CHANNEL	W	BREAK-EVEN L	L @ 25% GM	L @ 35% GM
DTC	\$861.48	\$861.48	\$646.11	\$559.96
Marketplace	\$750.20	\$750.20	\$562.65	\$487.63
Installer/dealer	\$658.92	\$658.92	\$494.19	\$428.30
Big-box retail	\$570.74	\$570.74	\$428.06	\$370.98
Two-step electrical	\$532.95	\$532.95	\$399.71	\$346.42

(All DERIVED)

9.4 What the model actually shows

The problem at \$969 is not margin. It is demand. At a \$250 landed cost, \$969 delivers **56% gross margin in retail** and **71% in DTC** — extraordinary numbers for hardware. Every channel clears comfortably. **And the volume is zero**, because the buyer's alternative is a free charger that pays them 15 ¢/kWh.

The problem at \$549 is the reverse. Two-step electrical breaks even at \$302 landed and needs \$226 for a 25% margin — inside my estimated band, but only just. Big-box needs \$243 at 25%. So **at \$549 the deck's price only works through DTC, marketplace and dealer-direct**, and the big-box channel the deck is banking on (Home Depot, 6,500 stores) is the tightest of all. If the landed cost is at the top of my band (\$275), **\$549 through big-box retail delivers a 15% gross margin — structurally unviable in a channel that charges slotting, co-op and markdown reserves against it.** That is probably the real reason the price moved.

Three costs the model above does not carry, and they are not small:

1. **Certification.** CSA C22.2 No. 280 / UL 2594 (EVSE) and CSA C22.2 No. 281.1 / UL 2231 (personnel protection), plus ISED radio certification to **RSS-247 Issue 4** (mandatory since 2026-01-24). Certification is quoted per project and **no list price or turnaround is published anywhere reached — UNVERIFIED**. The ISED cost depends entirely on whether the design uses a pre-certified radio module (Nanoleaf plausibly has one) or a discrete radio (full campaign).
2. **CFR verification.** Mandatory annually from the first credit, **no de minimis** (s.131), at reasonable assurance under ISO 14064-3:2019, plus a CPA-credentialed financial specialist on the s.125 team. **Market price UNVERIFIED** — the regulation mandates it and sets no fee. It is a **fixed annual floor**, which is why a small residential portfolio is uneconomic and a light-commercial portfolio with high kWh per site is not.
3. **The cash-flow lag.** Credits are provisional on creation (s.23(2) — provisional credits cannot be transferred) and become transferable only when the Minister deposits them following the verified s.120 report. Charge in 2028 → file by 30 April 2029 → deposit → transfer. **Cash lags the charging year by well over a year**, and any model that books credit revenue in the year of charging is wrong by 15+ months of working capital.

10. Negotiation checklist

Framing that must be stated up front: this is not a term sheet. The deck is an **OVIN / Ontario Centre of Innovation grant application** by Doodle Labs Inc (dba Nanoleaf), 24 FT employees, with OneRobotics Co. Limited as partner. **The sole-distribution deal is entirely unnegotiated.** Nothing in the deck constrains, promises or even mentions distribution terms. Every item below is open.

And a structural diligence item that could pre-empt the whole negotiation: the OVIN funding and the Ontario-design commitments in the deck may carry obligations — Ontario content, Ontario manufacturing, IP retention, revenue-sharing, or restrictions on granting exclusive rights — that constrain what an exclusive Canadian distributorship can be granted. **Confirm against the actual OVIN/OCI agreement, which I have not seen.** Do this before spending money on the negotiation, not after.

10.1 The walk-away terms

#	TERM	WHY	STATUS
1	Who owns the charging data for Canadian units, and who operates the communication platform	s.1(1) makes the data owner the charging-network operator, and therefore the only party that can create residential credits under s.102(1)(a). If Nanoleaf's or OneRobotics' global cloud owns the data, they are the CNO and the entire "funded by CFR credit revenue" premise is theirs, not yours . Landed \$250 is 2.6% of an Ontario lifetime credit stream at \$300/credit; the data owner has the other 97.4%.	WALK-AWAY
2	The product satisfies s.1(1) "charging station" — server communication reporting kWh AND timestamp — and exposes OCPP 1.6+	Without server-side energy-and-time reporting the unit creates zero credits at any price , in every province, for every party. Without OCPP it cannot be enrolled in ChargeLab or any Canadian aggregator, foreclosing even the fallback channel. Slide 18 evidences neither .	WALK-AWAY
3	Metering accuracy evidence against NIST Handbook 44 tolerances	Second, independent hardware gate on Q in ss.101(2)/102(2). No conformance evidence = no defensible credit claim, and it is a verifier's first question.	WALK-AWAY
4	Exclusivity on charging data — Nanoleaf and OneRobotics contractually forgo claiming credits on Canadian units through their own back-end	s.23(3) voids double-claimed energy for both parties — the collision destroys the credit, it does not merely allocate it. But s.23(3)'s deeming is confined to <i>same-subsection</i> collisions, so the contract must do independent work and cover cross-subsection claims too. Mirror ChargeLab's own drafting: exclusive right to claim, no manufacturer back-end, no third-party aggregator, "regardless of the connection protocol used."	WALK-AWAY

#	TERM	WHY	STATUS
5	Price / landed cost	At \$969 CAD MSRP there is no Canadian residential market. Establish whether the 27.5% MSRP increase is BOM/tariff cost or margin (§8.2). Target landed ≤ \$250 CAD. If the counterparty will not move off a landed cost that forces a >\$700 MSRP, the deal has no consumer channel.	WALK-AWAY at >\$400 landed
6	Data residency in Canada	s.166(4) requires records at a Canadian place of business or another place in Canada where they may be inspected, for 10 years ; s.166(5)'s offshore exception does not reach a registered creator. s.152(2)(f) makes the data platform the verifiable site. A cloud hosted and controlled outside Canada with no Canadian inspection point makes compliance impossible, not merely awkward.	WALK-AWAY
7	Certification: cUL/CSA/cETL/cQPS/ULC valid for Canada, and NOT via SPE-1000 field evaluation	Required by BC's Program Guide s.4 and expressly required by Quebec's <i>Cadre normatifs</i> s.4.1.1, which excludes SPE-1000 approvals. Uncertified product cannot be sold into either rebate channel or pass most electrical permits.	WALK-AWAY

10.2 The negotiable terms

#	TERM	WHAT TO SECURE
8	Who registers as the credit creator, and who keeps the revenue	Three structures: (a) distributor as CNO/registered creator; (b) Nanoleaf as CNO with the distributor as s.21 counterparty, or vice versa; (c) neither — route to a third-party aggregator and take zero credit exposure. Note s.23(5): a s.21 agreement can assign economics but never ownership , which follows creation automatically.
9	s.103 liability allocation	ss.103(2)–(8) say <i>"the charging-network operator or person"</i> throughout, disjunctively, with no allocation rule . Allocate expressly: who bears the s.103(4) cancellation, who bears the s.103(6) 90-day forced repurchase (clock runs from the day the notice is sent), and who is liable if the <i>other</i> party's spending fails to qualify. This is the largest uncapped tail exposure in the deal.
10	Revenue split and its basis — per credit, not per kWh	A flat national ¢/kWh rate is a large hidden geographic cross-subsidy. At 10 ¢/kWh the operator pays \$80.58 per credit in Quebec, \$82.74 in Ontario, but \$210.87 in Alberta on Schedule 6 — 21% of a \$400 credit in Ontario versus 53% in Alberta, and 134% at the 2024 average of \$157 in Alberta. Pay per credit or geo-weight the rate.
11	EER and CI revision repricing	s.102(2) reads <i>R_{ee}</i> as at 1 January of each compliance period from an ECCC document ECCC can revise without amending the regulation. Include a floor, a reopener, or a termination right. Note the direction is arguably upward (NRC found 4.2 for BEVs). Also note the s.75(7) election means Schedule 6 caps <i>CI_e</i> downside — that protection should be preserved, not contracted away.
12	Public-listing covenant	s.102(1)(b) pulls a public-facing light-commercial site into s.102 — and therefore into the s.103 ring-fence and the s.107 floor — the moment a charging-network operator lists it on its website or app. Covenant that the platform operator may not list the distributor's sites without consent.
13	Exclusivity scope and duration	Territory (Canada; carve Quebec in or out explicitly given its distinct rebate, listing and language regime); product scope (residential + light-commercial L2 only — no DC fast, no public network); channel scope (does exclusivity survive Nanoleaf's own DTC and its existing top-10 marketplace listings, which the deck already claims?); duration measured against a launch that is ~24 months away and a credit window that closes 2030-12-31. Do not accept a term that starts running before first shipment.
14	MOQ, stocking obligations and take-or-pay	Not in the deck. The single largest driver of capital intensity and the one number that turns §8 into a financing requirement. Insist on a first-order MOQ sized to a 2028 launch, not a 2026 forecast, with the ramp tied to actual sell-through.
15	Price protection and stock rotation	In a category where competitors give hardware away and a JuiceBox-style clearance ran 60% off (\$999 → \$399), price protection on inventory in the channel and a stock-rotation right are not luxuries.

#	TERM	WHAT TO SECURE
16	NACS/J3400 transition and stranded inventory	Slide 18 says J3400/NACS default with a magnetic J1772 adapter. Every significant Canadian brand already ships J1772 or NACS as a same-price or near-same-price selectable variant (Grizzl-E, FLO, ChargePoint and Wallbox at identical prices; Autel a \$16 premium). An adapter is not a variant — its rebate eligibility is untested (BC's guide names the connector, not an adapter), and a single-connector SKU is unsellable against dual-option competitors. Require build-to-order connector variants and a stranded-inventory remedy.
17	Warranty and RMA	Competitors offer lifetime warranty tied to programme membership (Grizzl-E, SWTCH). The residential credit window is 10 compliance periods; a unit that fails in year 5 destroys half the credit stream it was sold on. Establish who funds warranty, who holds the RMA pool, and what a lifetime-warranty commitment would cost.
18	Certification cost ownership	CSA/cUL, ISED RSS-247 Issue 4, and the Quebec eligible-models filing. A sole distributor has standing to file the Quebec listing directly — which is leverage, because it is a real asset the distributor can build and hold.
19	Minimum connectivity / uptime SLA on charger and cloud	Disconnection destroys credits (the unit stops being a "charging station" and stops reporting Q). SWTCH's own terms disclose this to consumers. The JuiceBox precedent is the cautionary case: Enel X Way exited North America and residential units lost every smart feature, with stock now clearing at 60% off. A cloud that dies takes the credit stream with it.
20	Termination, post-termination inventory, and the surviving s.103 balance	s.103 attaches to revenue received , and s.125(1)(b) filings run two compliance periods past it. Exit the deal and the spend obligation and the audited filings survive. Also sequence the exit: s.27(2)(a) requires the Minister to cancel any credits in the accounts on deregistration — sell down first. And there is no provision for assigning a registration , so an acquirer's path to the credit stream is undefined.
21	What happens if the residential credit pathway changes	ChargeLab's own consumer terms condition the whole programme on the CFR <i>"or successor carbon credit frameworks"</i> — that is the market pricing this risk. Mirror it. Cover: the s.102(1)(a) 2030/2035 sunsets; the unresolved 2031 question (§3.5); ECCC's live targeted-amendments process, which its own discussion paper says would <i>"reduc[e] the incentive for investments in ... electric vehicle charging"</i> ; and repeal or amendment by the Governor in Council without Parliament. Roughly 60% of a 2028 unit's lifetime credits sit in periods 2031–2035.
22	Consumer-facing title transfer at point of sale	s.102(1)(a) requires the occupants to own the charger (French text). Document title transfer on the invoice. Note the market's answer: SWTCH's \$300 deposit refunded after ~1,500 kWh reads as a structured conditional transfer of title engineered to satisfy exactly this.
23	Whether light-commercial is in scope at all, and on what title basis	If the recommendation in §7 is taken, the distributor must retain title to be the s.101 charging-site host. That is a fundamentally different commercial arrangement from a resale distributorship, and it needs its own pricing (transfer price, not MSRP) and its own inventory-financing structure.

10.3 Product specification issues to resolve before signing

These are in the deck and they are not cosmetic.

ISSUE	DECK TEXT	WHY IT MATTERS
48A vs 7.4 kW	Slide 18 says "48A" and also "Level 2 charger with 7.4 kW output." At 240 V, 48A ≈ 11.5 kW; 7.4 kW ≈ 32A at 230 V. These cannot both be true.	Correcting the brief: this matters very little for credit yield . Q is <i>energy delivered</i> , capped by the vehicle's annual demand, not by the charger's power rating — 3,500 kWh/yr needs only ~473 hours at 7.4 kW. Where it does bite: install cost (48A needs a 60A breaker and frequently a panel or service upgrade under CE Code Section 86 / Rule 8-200(1)(a)(vi); 32A needs 40A), hardwire vs plug-in (48A is hardwire-only in practice), and price defensibility — \$969 for a 7.4 kW unit is indefensible against a \$649.99 48A/11.5 kW Grizzl-E Ultimate; \$969 for 11.5 kW is merely uncompetitive.
"Type 2 Smart EV Charger" (slide 19) vs "J3400/NACS default, J1772" (slide 18)	Type 2 is IEC 62196-2 , the European connector, and is wrong for North America.	Combined with 7.4 kW — the European 32A/230V single-phase figure — this reads as European spec text carried into a North American deck . That is a signal the product may be a derived global platform rather than an NA-native design, which raises questions about CSA certification path, NEMA enclosure rating, cable temperature rating for Canadian winters (the deck claims –40 to 85 °C and IP67, which is good if true), and NACS/J1772 execution. Ask which platform this is built on.

ISSUE	DECK TEXT	WHY IT MATTERS
Grant ask \$600,000 (slide 10) vs \$1,000,000 (slide 24)		A 67% discrepancy in the funding ask
Budget \$3,920,021 (slide 10) vs \$3,930,000 (slide 24); slide 24's \$2,860,000 + \$1,000,000 = \$3,860,000		Reconciles to neither figure
Slide 10 total source of funds \$6,033,400 against a \$3.92M budget		An unexplained ~\$2.1M surplus
Slides 20–24 carry editorial notes ("Don't Need - combine with slide 3", "KEEP HIGHLEVEL - convert to gantt chart")		This is a working draft, not a reviewed submission. Every number in it should be treated as provisional

11. What could not be confirmed

Listed without padding. Each of these is a genuine gap, not a hedge.

11.1 About the product and the deal

1. **Whether the unit satisfies s.1(1)'s "charging station" definition** — server communication reporting kWh **and** timestamp. Slide 18 lists Matter over WiFi and BT pairing and nothing else. This is a hard eligibility gate and it is diligence item #1.
2. **Whether the unit exposes OCPP 1.6+.** Not mentioned anywhere in the deck. Without it the aggregator fallback channel is closed too.
3. **Whether the onboard metering meets NIST Handbook 44 tolerances** as referenced in the Q variable of ss.101(2)/102(2). No conformance evidence available.
4. **Who owns the charging data for Canadian units and who operates the platform.** A commercial fact about Nanoleaf's and OneRobotics' architecture, not a regulatory one. It decides whether the distributor can access residential credits at all.
5. **Landed cost, MOQ, stocking terms, price protection, warranty allocation, exclusivity scope.** None of these appear in the deck. There are no embedded workbooks. **The DTC-vs-B2B verdict and the capital-intensity ranking are therefore not fully answerable** — §7.0 gives the verdict on the reasoning available, §8 gives the model and the break-evens; the number that closes it does not exist yet.
6. **The \$700 USD MSRP itself.** Graded **P-USER** — first-party and authoritative because the user is the one negotiating, but not independently verifiable. No Nanoleaf L2 charger SKU, spec sheet or price exists in any public source reached: no product page, no press release, no trade coverage, and no listing in any of five Canadian retail catalogues read in full.
7. **Whether the 27.5% MSRP increase is cost (BOM/tariff/surtax) or margin.** Determines whether \$969 is negotiable. Ask directly.
8. **The OVIN/OCI agreement and any Ontario-content, IP or exclusivity constraints it imposes.** Not seen.
9. **A reported ~\$40.5M acquisition of Nanoleaf announced around May 2026** (single trade source, concerning the smart-lighting business). Uncorroborated, but sole-distribution counterparty risk is material.

11.2 About the regulation

10. **Whether a residential charger installed after 2030-12-31, or one the occupants do not own, falls into s.101 or simply stops earning.** Both readings are open on the face of the text (§3.5). Determines the terminal value of the business. Needs Canadian regulatory counsel and an ECCC ruling.
11. **Whether s.21(1)'s "before they have created any provisional compliance credits" means "in that compliance period" or "ever."** The harsh reading makes rolling multi-year aggregation impossible after year one. s.106(6)(a) and s.22(2) support the softer reading but do not settle it.
12. **Whether the s.103 duty, the s.103(4) cancellation and the s.103(6) 90-day replacement fall jointly or severally** on the CNO and its s.21 counterparty. The text is disjunctive throughout with no allocation rule.
13. **Whether a distributor's inventory purchases qualify as "expanding electric vehicle charging infrastructure" under s.103(1)(a),** and whether a per-kWh consumer rebate sits under (a) or must sit under (b). Every operating Canadian programme behaves as if the rebate qualifies; no ECCC guidance confirms it. If inventory does not qualify, the COGS-offset reading collapses.
14. **The meaning of "fair market value" in s.107.** Undefined in s.1(1); no guidance on bilateral or related-party transfers.
15. **Whether the s.125 revenue report must be filed by the s.21 counterparty.** s.103(1) expressly names the counterparty; s.125(1) does not.
16. **Whether federal CFR credits can be created on the same kWh covered by a provincial LCFS.** s.23(3) bars re-use only "under the same subsection" of these Regulations and nothing in SOR/2022-140 bars a provincial stack. But **BC assigns residential supply below five dwelling units to the utility** under its own LCFS — so in BC, single-family home charging may be the utility's credit, not yours. The federal test (CNO = platform + data owner) and the BC test (utility is the supplier) are different tests and do not obviously bind each other. **Not resolved. Material, because BC is one of the three provinces holding ~92.7% of Canada's EV parc.**
17. **Whether SOR/2022-140 appears in the schedule to the *Environmental Violations Administrative Monetary Penalties Regulations*,** and what the penalty amounts are. AMP and CEPA offence exposure sits behind every filing obligation and was never opened.
18. **Whether a Canada Gazette Part I draft of ECCC's targeted amendments has published,** and what it says about credit multipliers or minimum domestic content. The consolidation confirms no amendment has been *made* since 2024-09-30; whether one has been *proposed* is unchecked. Drafts never appear in consolidations.
19. **Whether the Specifications v4.2 pre-publication will be adopted,** and what the further Fall 2026 revision (2024 reference year) does to the provincial CI table. ECCC flags both as provisional in its own text.
20. **The count of accredited verification bodies holding CFR Sector 3 (Electricity).** One stream counted 10 of 10 SCC-accredited bodies; the reviewer could not reproduce it (HTTP 403). The inherited "~9 bodies" figure remains **UNVERIFIED**. Not load-bearing: s.142(1) subcontracting and s.143 outsourcing make the field wide.
21. **Whether Measurement Canada approval is required for a residential L2 meter.** s.161(1)(a) requires devices meeting the *Weights and Measures Act*; s.102(2) instead references NIST Handbook 44; s.161(2) provides an escape where no such device or standard exists. The three do not obviously reconcile. Measurement Canada's PS-EVSE-03 is still a **draft** and applies only to transaction-based billing, with the obligation on the device owner, not the manufacturer.
22. **A CFR-CATS registration fee or processing-time service standard.** None found in the Regulations or ECCC's FAQ. Reported as "none found," not asserted as zero.

11.3 About prices, rebates and the market

23. **The current CFR credit price.** ECCC publishes credit market reporting in its Data Catalogue and it was not opened. The "\$400/credit, early March 2026" figure is **UNVERIFIED**. ECCC's own caveat on its published series: "*the credit pricing information reported will not be economically robust until the market matures.*"

24. **No dollar value is computable for s.112(3) or s.118(3)–(4) for compliance period 2026** — CPI_A for 2026 is the 2026 calendar-year average and does not exist yet. The **mechanism** is P-LEG; the ~\$380 CP2025 figure is DERIVED.
 25. **Big-box and marketplace Canadian pricing.** bestbuy.ca hit a bot-protection interstitial and canadiantire.ca, homedepot.ca and amazon.ca were not attempted. No house-brand or big-box-exclusive L2 pricing is in this analysis. **Directional note:** big-box normally sits at or below the specialty-retail budget band, so their absence can only **lower** the observed floor — it strengthens rather than weakens the finding that \$969 is high. Grizzl-E's Club FAQ implies an Amazon.ca channel for the free-charger programme, so its reach may be larger than documented.
 26. **Marketplace referral-fee rate for EVSE on Amazon.ca.** Assumed 15% in §8. Unverified.
 27. **The provincial rebate negatives.** Ontario, Alberta, Manitoba, Saskatchewan, Nova Scotia, New Brunswick and Newfoundland were confirmed as having no home-charger rebate **only from trade aggregators** — no responsible provincial department page was reached for any of them. **Ontario, the largest market, rests entirely on aggregators.** PEI's \$750 + \$750 amounts and its reported end-2026 wind-down are likewise S-TRADE.
 28. **Whether provincial rebates permit stacking with a CFR-funded per-kWh rewards enrolment,** and whether enrolling a rebated charger in a third-party credit programme breaches the rebate terms. Several programmes claw back on resale or change of use. Quebec's promotion-voids-the-grant rule points the wrong way.
 29. **Whether BC Hydro's rebate-eligible-charger database is a hard gate or advisory,** and how it reconciles with the Program Guide's Tesla exclusion (Tesla appears as a selectable manufacturer in the database). Do not build BC positioning on Tesla's absence without confirming.
 30. **Certification cost and calendar time** for CSA C22.2 No. 280 / UL 2594 and No. 281.1 / UL 2231. Quoted per project; no list price or turnaround published anywhere reached.
 31. **Nanoleaf's existing ISED/IC certifications and radio architecture** (pre-certified module vs discrete radio). Determines whether RSS-247 Issue 4 is a minor inherited step or a full campaign. Answerable from ISED's certification database; not reached.
 32. **Whether Quebec's French-language obligations extend to the mobile app UI** of a connected charger, and whether the federal *Consumer Packaging and Labelling Act* bilingual requirements apply to EVSE. Product, packaging and trademark obligations effective 2025-06-01 are confirmed from law-firm commentary only, not from the Charter text or OQLF guidance.
 33. **Published revenue-share percentages** for Targray, Polara, Smart Charging Technologies, FLO/FuSE and Hypercharge's CFR programme. All describe volume-dependent or percentage-based returns without publishing the split. Not estimated.
 34. **Whether ChargeLab's white-label offering extends to letting a distributor be the registered creator** rather than ChargeLab. The white-labeling page returned HTTP 404.
 35. **Average annual residential EV charging throughput in Canada.** The 3,500 kWh/yr figure traces to ChargeLab, which has a direct commercial interest in it being high; no StatCan, NRCan or provincial-utility source was found. The 2,455 kWh/yr counter-figure rests on three of my own uncited assumptions (15,200 km/yr, 19 kWh/100 km, 85% home-charging share) and is an illustrative range, not a sourced rebuttal. **Every advertised payout and every payback figure in circulation inherits this optimism proportionally.**
 36. **The exact obligation in Grizzl-E's Membership T&C section "Rebate Assignment and Compliance"** (effective 2026-06-10). Almost certainly where the credit-assignment mechanism and any s.103 reinvestment representation are documented. The section heading was observed; the section was not opened. It is the best available template for what a compliant consumer-facing credit assignment looks like in Canada.
 37. **The commercial title terms of the SWTCH and Grizzl-E "free charger with refundable deposit" models.** Both read as sales funded by credit revenue rather than retained title, and both operators' materials describe the customer as the owner — but the underlying purchase terms were not read. Given s.102(1)(a) requires occupant ownership, the exact title mechanics are worth reading before copying the structure.
-

12. How 12388588 Canada Inc. registers

The filing path, in order. Every link was opened and checked on 2026-08-26; anything that would not load was left out rather than guessed at.

Get credentials

Each person acting for the corporation needs a Government of Canada sign-in. Credentials are personal and must not be shared.

- [CATS — Choose a Secure Sign-In Method \(Login\)](#)
The CATS sign-in page where you pick either a Sign-In Partner (bank credentials) or a GCKey user ID; used at every login and also as a step of first-time account registration.
Filed by: Each individual CATS user (Authorized Agent, Authorized Administrator, Read/Write users) — credentials must not be shared
- [GCKey help](#)
Government of Canada guidance on what a GCKey is, how to create one and how to recover it — the credential a corporation's agents use to reach CATS if they do not want to use a bank Sign-In Partner.
Filed by: Each individual who will use CATS, in their own name
- [CATS — Cyber Authentication FAQ \(sign-in help inside the portal\)](#)
The sign-in help FAQ hosted inside the CATS portal, covering Sign-In Partners, GCKey, what information is shared with the government, and credential recovery.

Register the corporation

s.25 registration as a registered creator, filed through CATS. Schedule 3 sets out what the registration report must contain.

- [Credit and Tracking System \(CATS\) — home](#)
ECCC's single portal for OBPS, the GHG Offset Credit System and the Clean Fuel Regulations; it is the specified electronic form for every CFR registration, application, report and credit transaction, so it is the first and last stop in the whole process.
Filed by: The corporation's Authorized Agent, on behalf of 12388588 Canada Inc.
- [Credit and Tracking System \(CFR-CATS\) — Registration frequently asked questions](#)
ECCC's public FAQ covering how to open a CFR account in CATS, sign-in methods, two-factor codes and authorized-agent roles; read this before the first registration attempt.
- [SOR/2022-140 s.25 — registration as a registered creator](#)
The registration obligation: s.25(1) requires a registration report containing the information in section 1 of Schedule 3 plus any applicable information in sections 4 to 12 of that Schedule. It is submitted through CATS, not as a downloadable form.
Filed by: For EV charging the registered creator is the charging-site host (s.101(1)) or the charging-network operator (s.102(1)) — NOT the equipment distributor. A charger distributor is neither by default; that is exactly why the s.21 agreement mechanism exists. · **Deadline:** No fixed date, but s.25(2): a registered creator must not create provisional compliance credits until the DAY AFTER the day on which they become a registered creator. The s.25(3) 60-day exception ran only from the day the Regulations were registered (2022-06-21) and has long expired — register before the period you intend to claim.
- [SOR/2022-140 Schedule 3 — Contents of Registration Report](#)
The itemised list of what the s.25 registration report must contain — company name and addresses, business number, authorized agent and contact person details, and the activity-specific items in sections 4 to 12. Use it as the checklist before opening the CATS wizard.
Filed by: The Authorized Agent assembles this before starting the CATS registration · **Deadline:** Same as s.25

Put the s.21 agreement in place

If another party operates the charging network, s.21 names who creates the credits — and s.22 sets the deadline that decides whether you earn for the year at all.

- SOR/2022-140 s.21 — agreement to create credits (what the contract must contain)

The mechanism that lets a party who is not itself the charging-site host or charging-network operator create the credits: a registered creator may, BEFORE it has created any provisional credits, enter a signed agreement with a person referred to in s.101(1) or s.102(1). s.21(2) fixes the mandatory content of that agreement.

Filed by: The registered creator; the agreement must be signed by the authorized agents of BOTH parties · **Deadline:** s.21(1) bars entering an agreement for a compliance period after you have already created provisional credits for that period.

- SOR/2022-140 s.22 — submitting the agreement, and when credits may start

The filing step for a s.21 agreement and the timing rule that decides which days of a compliance period your credits can cover.

Filed by: The registered creator submits the agreement to the Minister through CATS · **Deadline:** s.22(1): no provisional compliance credits may be created under the agreement until the DAY AFTER the day it is submitted. s.22(2): if the agreement is submitted during the FIRST 60 DAYS of the compliance period it relates to, credits may be created as of the first day of that compliance period, unless the agreement provides for a later date.

Report

The annual credit-creation report and its required contents.

- SOR/2022-140 s.120 — annual credit-creation report (the reporting deadline that applies to EV charging)

The annual credit-creation report a registered creator must file for credits created under s.19(1)(a), s.19(1)(d)(i), (ii), (iv) or (v), or s.20(a). EV charging credits are created under s.19(1)(d)(iv), so this is the report an EV-charging registered creator files.

Filed by: The registered creator, signed by its authorized agent; submitted through CATS with the s.131 verification report attached · **Deadline:** No later than APRIL 30 of the calendar year that follows the end of the compliance period (s.120(1)).

- SOR/2022-140 Schedule 11 — Contents of Annual Credit-Creation Report

The itemised content of the s.120 annual credit-creation report — the data set that has to be captured throughout the year and that the verification body will test.

Filed by: The registered creator · **Deadline:** Filed with the s.120 report, by April 30

Get it verified

Third-party verification is mandatory, from a body the Standards Council of Canada has accredited for the CFR.

- Methods for Verification and Certification (MVC)

ECCC's binding methods document setting the accreditation requirements for verification bodies, the verification schedule, level of assurance, materiality thresholds and site-visit rules; you use it to scope and contract a third-party verification of your credit-creation report.

Filed by: The verification body performs the work; the registered creator commissions it and submits the resulting verification report · **Deadline:** The verification report is submitted together with the report it verifies (s.131(3))

- SOR/2022-140 s.131 — when a report must be third-party verified

The verification obligation itself: which reports must be verified by an accredited verification body, the exception when no credits were created, and the requirement to file the verification report with the report it verifies.

Filed by: The registered creator commissions the verification body and submits both documents through CATS · **Deadline:** Same date as the report being verified

- SCC — Clean Fuel Regulations accreditation sub-program

The Standards Council of Canada page for the CFR-specific accreditation sub-program — the accreditation your chosen

verification body needs in order to verify a CFR report.

Filed by: Verification bodies hold the accreditation; the registered creator only needs to confirm its chosen body has it

- [SCC — Verification and Validation accreditation program](#)

The parent SCC program for ISO/IEC 17029 / ISO 14065 / ISO 14066 verification and validation bodies, and the prerequisite for the CFR sub-program above.

Filed by: Verification bodies

- [SCC — Accreditation programs \(index\)](#)

SCC's index of all accreditation programs; the relevant branch is Verification and Validation and, under it, the Clean Fuel Regulations sub-program.

- [SCC — Find an accredited organization \(directory\)](#)

SCC's searchable directory of accredited organizations — the practical way to identify candidate verification bodies for a CFR engagement.

Primary sources

The regulation, the carbon-intensity specifications and the workbook every number in this assessment traces back to.

- [Clean Fuel Regulations \(ECCC programme landing page\)](#)

ECCC's top-level page for the Clean Fuel Regulations, the parent of the About / How it works / Compliance sections; the orientation page for a first-time registrant.

- [Compliance with the Clean Fuel Regulations](#)

The single hub page that links every supporting document a registrant needs — regulatory text, RIAS, verification methods, quantification methods, CATS access and user guides, the Fuel LCA specifications, and the ECCC contact address; ECCC advises bookmarking it because the documents are re-published periodically.

- [Clean Fuel Regulations \(SOR/2022-140\) — consolidation, table of contents](#)

The Justice Laws consolidated regulation index, with links to the HTML, XML and PDF full documents; the entry point to the authoritative text for every obligation and deadline below.

- [Clean Fuel Regulations \(SOR/2022-140\) — full text, one page](#)

The complete consolidated regulation in a single HTML page — useful for searching across the whole instrument; the per-section links below are better for citing one obligation.

- [SOR/2022-140 s.101 — electricity, charging-site host](#)

One of the two EV-charging credit-creation roles. A charging-site host may create provisional credits for electricity supplied to electric vehicles by charging stations OTHER than those covered by s.102(1), and s.101(2) gives the credit formula and the energy-efficiency-ratio election.

Filed by: The charging-site host, or a registered creator who has a s.21 agreement with them · **Deadline:** None in this section

- [SOR/2022-140 s.102 — electricity, charging-network operator \(carries the 2030 residential deadline\)](#)

The other EV-charging credit-creation role, and the one with hard eligibility gates: residential charging qualifies only for stations installed by a fixed date, and public charging qualifies only if the station's location is published on the operator's website or app.

Filed by: The charging-network operator, or a registered creator who has a s.21 agreement with them · **Deadline:** s.102(1) (a): private-dwelling-place charging stations qualify only if the compliance period begins on or before JANUARY 1, 2035 AND the station was installed on or before DECEMBER 31, 2030.

- [ECCC Data Catalogue — Carbon Intensity Calculations for the Clean Fuel Regulations](#)

The official distribution point for the CFR Specifications for Fuel LCA Model CI Calculations, the CFR Data Workbook and the Landfill Methane Tool, with Current Version / Previous Versions / Pre-publications folders; used whenever you need to determine or re-determine a carbon intensity.

Filed by: Registered creators, foreign suppliers and carbon-intensity contributors

- **ECCC Data Catalogue — CFR current-version documents folder**
The English 'Current Version' directory listing that names the four in-force files and their dates; use it to confirm you are working from the current specification rather than an archived one.
- **CFR Specifications for Fuel LCA Model CI Calculations, v4.0 (PDF)**
The mandatory instruction set for calculating carbon intensities of fuels, energy sources and material inputs under the CFR, including default values, high heating values, emission factors and the energy efficiency ratios and electric-vehicle classes that ss.101 and 102 refer to.
Filed by: Registered creators, foreign suppliers, carbon-intensity contributors
- **Clean Fuel Regulations Data Workbook, v4.0 (XLSX)**
The companion data workbook to the Specifications; ECCC treats the two as a pair, and you need both to determine a carbon intensity.
Filed by: Registered creators, foreign suppliers, carbon-intensity contributors
- **Regulatory Impact Analysis Statement — Clean Fuel Regulations (Canada Gazette, Part II)**
The RIAS published with SOR/2022-140 on 6 July 2022, explaining the policy intent behind the credit classes including the EV-charging categories.
- **Fuel Life Cycle Assessment (LCA) Model**
The Government of Canada tool used to calculate the life cycle carbon intensity of fuels and energy sources — the model the CFR Specifications and Data Workbook feed into. The page covers how to access the Model, recorded training sessions, and how to import a module into openLCA.
Filed by: Registered creators, foreign suppliers, carbon-intensity contributors

Two things you cannot link to

The CATS registration buttons are JavaScript-driven with `href="#"`, so **"Open a CFR Account in CATS" cannot be deep-linked** — a first-time registrant must click it from the CATS home page. And ECCC lists the current CATS User Guide (v3.1) *without* a hyperlink, annotated "update on this page to be available at a later date"; request it from cfsncp@ec.gc.ca rather than relying on the superseded v1.1 PDF.

Deliberately not listed

- **Provincial rebate applications** — Quebec Écorecharge, CleanBC Go Electric and the rest could not be loaded and verified in this pass, so no link is published. They are live programmes; the URLs simply have not been checked to the standard the rest of this list meets. (UNVERIFIED)
- **A CFR fee schedule** — nothing on ECCC's compliance hub indicates a registration or account fee, but the absence of one could not be affirmatively confirmed. (UNVERIFIED)
- **Verification pricing** — mandatory under s.131(1) for the annual report, but no accredited body publishes a rate. Budget by quotation. (UNVERIFIED)

Programme contacts of record: cfsncp@ec.gc.ca (ECCC Low Carbon Fuels Division) and modeleacvcarburant-fuelltcamodel@ec.gc.ca (Fuel LCA Model).

Appendix A — the numbers this report is built on, and their grades

INPUT	VALUE	GRADE
R_ee, light/medium-duty ≤2722 kg	4.1	P-GOV (value) / DERIVED (application to s.102(2))
R_ee statutory election floor	2.5	P-LEG

INPUT	VALUE	GRADE
D, energy density of electricity	3.6 MJ/kWh	P-LEG
CI_ref, liquid class	2026: 85.3 → 2030+: 80.1 gCO2e/MJ	P-LEG
CI_e, provincial	Schedule 6 s.9 (primary) / Specs v4.0 Table 12 (election)	P-LEG / P-GOV
Residential install deadline	2030-12-31	P-LEG
Last residential compliance period	CY2035	P-LEG
s.103 reinvestment share	100% of transfer revenue	P-LEG
s.103(3) runway	24–36 months, depending on transfer timing within the period	P-LEG
s.103(6) cure period	90 days from the day the notice is sent	P-LEG
Annual credit-creation report	30 April following the compliance period	P-LEG
Verification de minimis	None for s.120; s.131(2)(b) exempts s.125 where no transfer revenue	P-LEG
Verifier rotation	Individuals, 5 periods on / 3 off — not firms	P-LEG
Record retention	10 years, in Canada	P-LEG
Substitute-compliance anchor	$\$350 \times \text{CPI_A/CPI_B}$, capped at 10% of a supplier's requirement (s.15(1))	P-LEG; ~\$380 for CP2025 DERIVED
Clearance-mechanism maximum	$\$300 \times \text{CPI_A/CPI_B}$	P-LEG
2024 CFR credit price, volume-weighted	\$157.07	P-GOV/S-TRADE
"\$400/credit, March 2026"	—	UNVERIFIED
Assumed home charging load	3,500 kWh/yr (vendor) / 2,455 kWh/yr (bottom-up check)	S-TRADE / DERIVED
Nanoleaf MSRP	\$700 USD → \$957–\$969 CAD	P-USER
Deck positioning price	\$549 MSRP	P-DECK
Deck pain-point band	"\$700–\$1,200"	P-DECK
Deck Y1 / Y5 volume	5,000 units / \$2.745M ; \$10M+ annual	P-DECK
Ramp between Y1 and Y5	38.2% CAGR (geometric interpolation)	DERIVED — my assumption
Canada share of global volume	5–10%	DERIVED — my assumption
Landed cost band	\$220–\$275 CAD, centred \$250	DERIVED — my estimate
Channel margin stack	DTC 0.92P–\$30 / marketplace 0.80P–\$25 / dealer 0.68P / retail 0.62P×0.95 / two-step 0.55P	DERIVED — my assumptions
Quebec Écorecharge	\$600 flat, \$600 pre-tax floor, ends 2028-03-31	P-GOV
BC CleanBC	flat \$350 (50% cap binds at any charger price; install is eligible)	P-GOV
Grizzl-E Club / SWTCH / ChargeLab	\$0 hardware; 15 ¢ / 11 ¢ / 10 ¢ per kWh	S-TRADE

(Report also written to `/private/tmp/claude-501/-Users-arshadkazi-Developer/eb6964b7-e3fc-46dc-925e-2721de3f2ad4/scratchpad/nanoleaf-cfr-deliverable.md`)