



Banking on Electric Vehicles in India

A Blueprint for Inclusion of EVs in Priority Sector Lending Guidelines

Report / Jan 2022



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Acknowledgments

The authors are grateful for the time and insights offered by industry experts that participated in the survey that formed the basis of the recommendations offered in this report. The authors also thank the following individuals for offering their insights and perspectives on this work:

RMI Samhita Shiledar

RMI India Chetna Nagpal, Dimpny Suneja, Raghav Anand

Axis Bank Sumit Bali

cKers Finance Nishant Goel, Jayant Prasad

Flipkart Dharashree Panda, Mahesh Pratap Singh

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Suggested Citation

NITI Aayog, RMI, and RMI India, Banking on Electric Vehicles in India: A Blueprint for Inclusion of EVs in Priority Sector Lending Guidelines, January 2022. www.rmi.org/insight/banking-on-electric-vehicles-in-india.

Available at RMI India:

<https://rmi-india.org/insight/banking-on-electric-vehicles-in-india>.

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About Us



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NITI Aayog

About NITI Aayog

The National Institution for Transforming India (NITI Aayog) was formed via a resolution of the Union Cabinet on 1 January 2015. NITI Aayog is the premier policy 'Think Tank' of the Government of India, providing both directional and policy inputs. While designing strategic and long-term policies and programmes for the Government of India, NITI Aayog also provides relevant technical advice to the Centre and States. The Government of India, in keeping with its reform agenda, constituted the NITI Aayog to replace the Planning Commission instituted in 1950. This was done in order to better serve the needs and aspirations of the people of India. An important evolutionary change from the past, NITI Aayog acts as the quintessential platform of the Government of India to bring States to act together in national interest, and thereby fosters Cooperative Federalism.



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RMI is an independent nonprofit founded in 1982 that transforms global energy systems through market-driven solutions to align with a 1.5°C future and secure a clean, prosperous, zero-carbon future for all. We work in the world's most critical geographies and engage businesses, policymakers, communities, and NGOs to identify and scale energy system interventions that will cut greenhouse gas emissions at least 50 percent by 2030. RMI has offices in Basalt and Boulder, Colorado; New York City; Oakland, California; Washington, D.C.; and Beijing.



About RMI India

RMI India is an independent think-and-do tank. RMI India takes inspiration from and collaborates with RMI, a 40-year-old non-governmental organisation. RMI India's mission is to accelerate India's transition to a clean, prosperous, and inclusive energy future.

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Highlights

- Cumulative investment in India's electric vehicle (EV) transition could be as large as INR 19.7 lakh crore (\$US266 billion) between 2020 and 2030, highlighting the need for higher liquidity and lower cost of capital for EV assets and infrastructure. The recently announced first-loss risk-sharing instrument led by NITI Aayog and the World Bank has the potential to meet this gap.
- Including EVs in the Reserve Bank of India's priority sector lending (PSL) guidelines can complement the \$US300 million facility and encourage the financial sector to mobilise necessary capital.
- Priority sector lending mandates certain banks to direct a specified percentage of bank credit to priority sectors. Inclusion for retail lending to EVs has the potential to increase investor confidence by providing a market signal of ongoing government commitment to the sector. It can also ensure a swift and equitable transition by providing a mandate for financial institutions to direct credit to segments and use cases where credit deficiency persists despite compelling economics.
- Electric two- and three-wheelers, as well as four-wheelers in commercial use cases, represent favourable segments towards inclusion of EVs in priority sector lending due to greater need for formal credit, higher potential for job creation and scale in urban and rural areas, relatively high sales forecasts, greater model availability, and smaller gap to parity in total cost of ownership.
- To operationalise the concept of including EVs in priority sector lending, central government policymakers can liaise with the Reserve Bank of India to design and issue the requisite guidelines. Financial institutions and the EV ecosystem can contribute by outlining how PSL inclusion can influence their growth and investment plans. This report can serve as the basis for this discussion.
- While this intervention is promising, it will not solve the financing challenges alone and a variety of persistent risks to EV finance remain. Additional policy and market measures to address those challenges include state-level fiscal incentives, open data on vehicle performance, industry-led buyback programmes, and loan guarantee facilities.



Introduction: India's EV Transition and the Role of Finance

Opportunity: Recent investments in India's EV ecosystem

India's commitment to the EV30@30 initiative—to reach a 30 percent sales share for EVs by 2030—presents a cumulative investment opportunity of as large as INR 19.7 lakh crore (\$US266 billion).¹ There has been a recent increase in public budgetary allocations and corporate investment in EVs in order to achieve this (see Exhibit 1). Central and state

governments have approved fiscal incentives for EVs, charging infrastructure, and manufacturing that are helping achieve parity in total cost of ownership with internal combustion engine (ICE) vehicles for several segments and use cases. Original equipment manufacturers (OEMs) and component manufacturers are investing in indigenous manufacturing and supply chains. EV startups are attracting significant venture funding due to their product and business model innovation, capturing as well as creating the market opportunity presented by EVs.

Exhibit 1

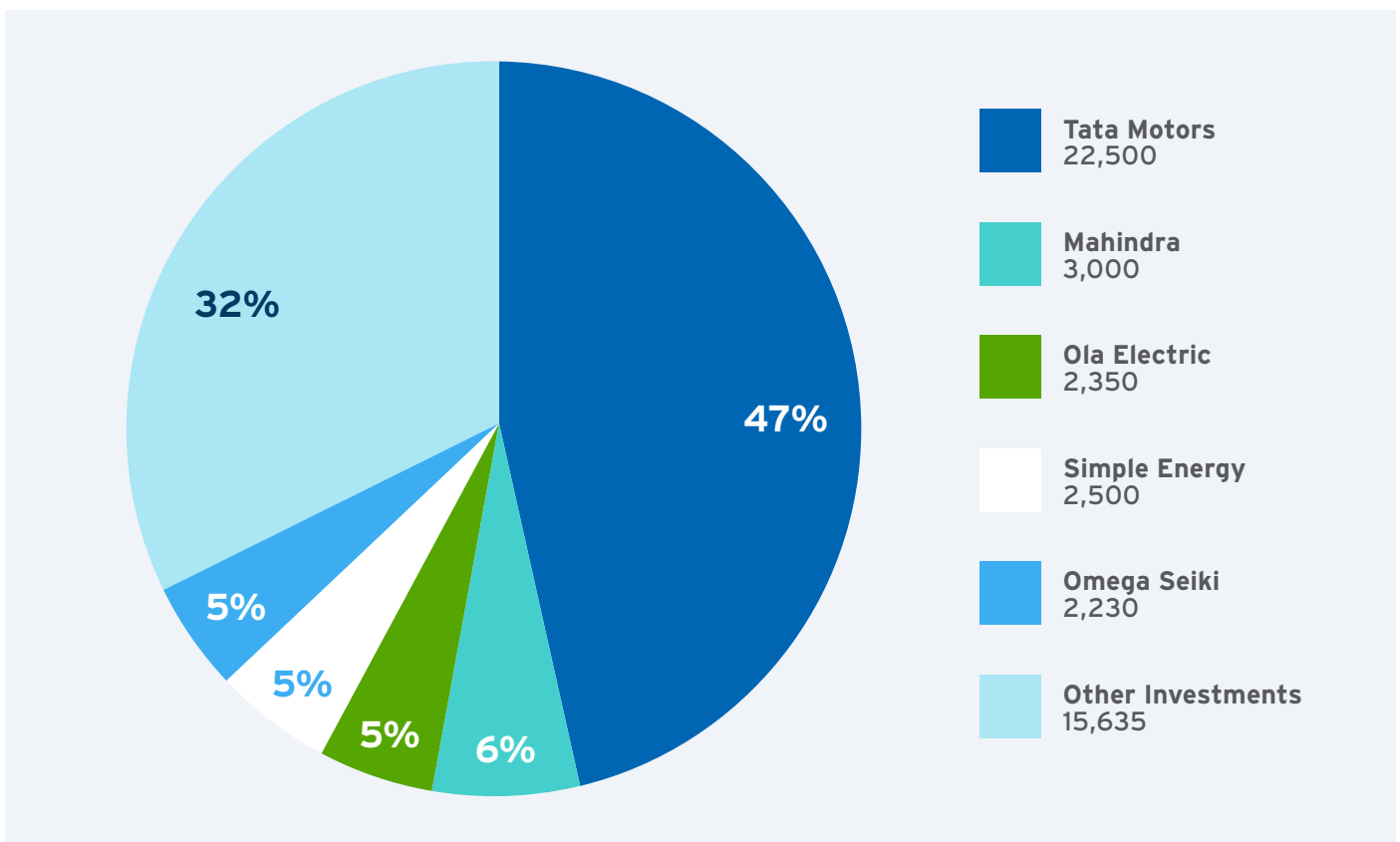
Key capital commitment and deployment for electric mobility in India between January and December 2021.

Stakeholder(s)	Initiative(s)
Department of Heavy Industry (DHI), Government of India	Revision of Faster Adoption and Manufacturing of Electric Vehicles Phase II (FAME II) demand incentives for electric 2-wheelers (e-2W) from INR 10,000 per kWh to INR 15,000 per kWh. Incentive cap increased from 20 percent to 40 percent of the capital cost of the e-2W. Energy Efficiency Services Limited (EESL) will be responsible for aggregating and leasing 3 lakh electric 3-wheelers (e-3W) as well as electric buses (e-buses) available under FAME II. ²
Government of India	Production-Linked Incentive (PLI) scheme worth INR 18,100 crores (US\$2.4 billion) approved for investments in advanced chemistry cell (ACC) battery manufacturing and worth INR 26,058 crore (US\$3.5 billion) approved for automotive manufacturing focusing on EVs and hydrogen fuel cell vehicles. ³
State governments	State EV policies of Assam, Goa, Gujarat, Himachal Pradesh, Meghalaya, Odisha, Rajasthan, and West Bengal notified. Maharashtra EV policy revised to offer additional demand, supply, and charging infrastructure. ⁴ Karnataka EV policy undergoing a set of revisions, including the announcement of capital subsidies for manufacturing and initial proposals for demand incentives and other concessions for EVs. ⁵

E-commerce, fleet operators/ aggregators	Companies including Amazon, Capgemini, Dalmia Cement, JSW Cement, and Zomato made new commitments to 100 percent electrification of their fleets in India between 2030 and 2040. ⁶
OEMs, EV component and battery manufacturers, EVSE companies	Companies including Ashok Leyland, Mahindra & Mahindra, Omega Seiki Mobility, Simple Energy, and Tata Motors made announcements to invest a total of over INR 48,000 crores (US\$6.5 billion) in electric vehicles, components, and battery manufacturing; electric vehicle supply equipment (EVSE); research and development (R&D); and deployment in 2021. ⁷
EV startups	Startups including Hero Electric, Magenta, and Ola Electric raised venture funding of nearly INR 3,307 crores (US\$446 million) for EV/component/battery manufacturing and EVSE in 2021. ⁸
Financial institutions	Axis Bank and the United Kingdom's Private Infrastructure Development Group (PIDG) announced a capital financing guarantee of INR 1,500 crores (US\$200 million) towards manufacturing, distribution, and servicing of EVs, batteries, components, and charging infrastructure. ⁹

Exhibit 2

Key investment announcements in India (in INR thousand crores) totalling INR 48,000 crores (US\$6.5 billion), January-December 2021



Challenge: Low Liquidity for EVs in Today's Market

The public and private sector investments and initiatives in the EV ecosystem are accelerating capital deployment towards India's electric mobility transition. Government of India flagship initiatives FAME II, PLI for ACC batteries and automotive manufacturing alone total INR 0.6 lakh crores (\$US7.5 billion). Ola Electric alone is currently worth INR 0.2 lakh crores (\$US3 billion).¹¹ However, in terms of sales, EVs represent a little over 1 percent of the market.¹²

At the same time, retail lending to support consumers

and institutions in financing EVs has been slow to pick up. Financial institutions (FIs) have not yet increased lending to the level that would be required—an estimated INR 40,000 crores (\$US5 billion) by 2025 and INR 3.7 lakh crores (\$US50 billion) by 2030.¹³

Given the nascency of EV technology and adoption, FIs such as banks and non-banking finance companies (NBFCs) are not lending to EVs due to associated asset and business model risks (see Exhibit 3). These risks are both real (e.g., uncertainty of resale value) and perceived (e.g., product quality). As a result, if financing is available, EV buyers are unable to obtain terms (i.e., interest rates and tenures) that are comparable to ICE vehicles.

Exhibit 3 Challenges and risks encountered in financing EVs¹⁴

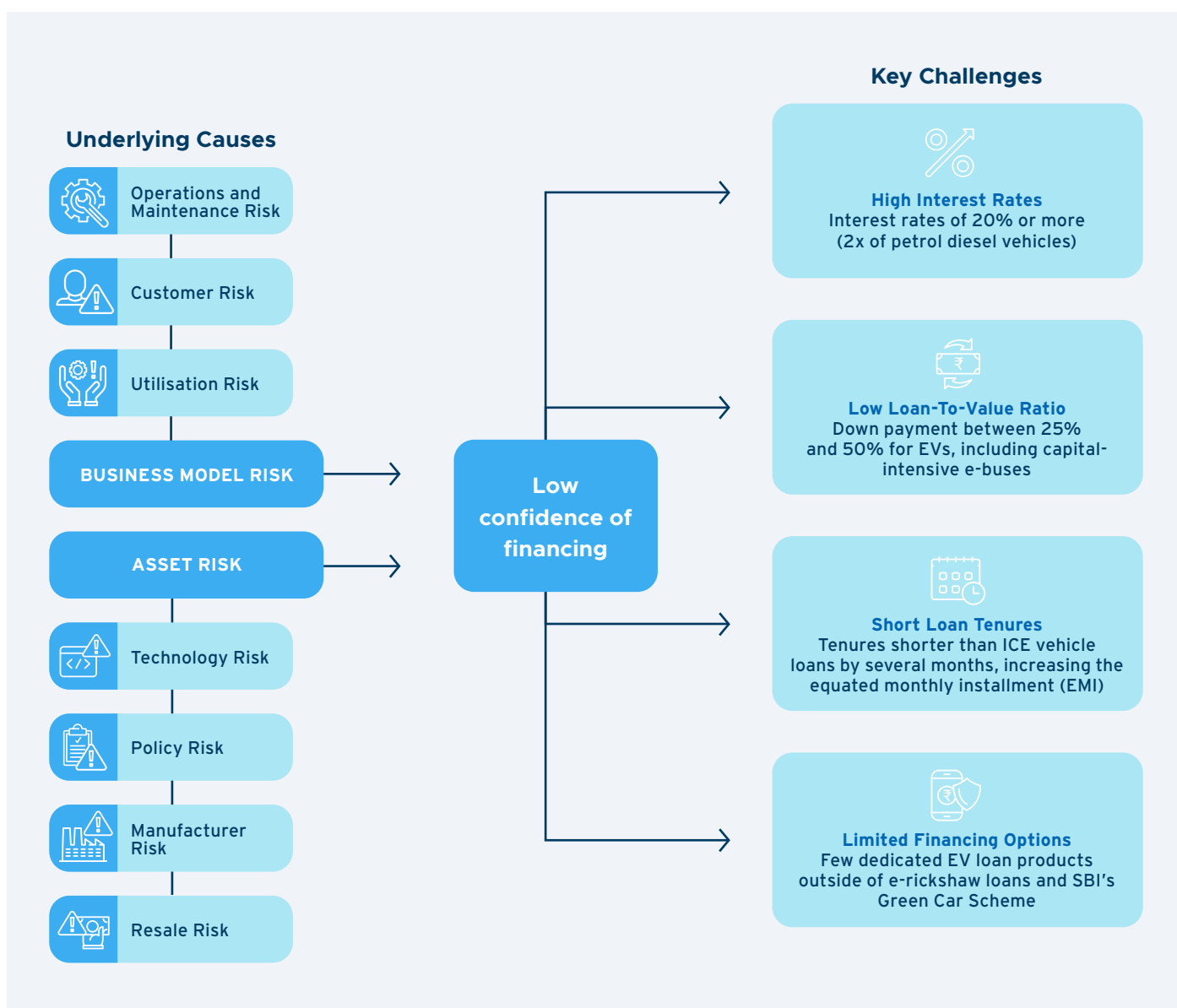


Exhibit 4 International examples of government support to financing EVs¹⁵

Country	Government Entity	Intervention	Description
Australia	Clean Energy Finance Corporation	Risk-sharing mechanism	Australia's public green bank partners with private banks to share risks and set up green vehicle loan schemes through an Asset Finance program.
United Kingdom	Transport Scotland	Interest rate-free loans	The Scottish Government agency offers interest-free loans for cars, motorcycles, and scooters with longer repayment periods.
United States of America	California State	State EV authority	California State Bill 633 established an authority to lower EV capital with incentives, rebates, tax credits, loan guarantees, seed funds, and matching grants.

Governments across the world are recognising this challenge and are introducing supportive measures to facilitate easier financing of EVs. Exhibit 4 shows a few prominent examples.

In India, NITI Aayog and the World Bank are setting up a \$US300 million first-loss risk-sharing instrument. The instrument is intended to act as a hedging and guaranteeing mechanism that banks and NBFCs can access in the event of payment

delays on EV loans. The programme is expected to bring down the financing costs for EVs by 10-12 percent. Up to \$US1.5 billion could be mobilised as a result of the instrument.¹⁶

This availability of credit will greatly enhance liquidity for EVs. Simultaneously, there is a need for complementary regulatory measures that support the risk-sharing instrument and provide an incentive for FIs to finance EVs.



The Potential of Priority Sector Lending to Catalyse EV Finance

Priority sector lending (PSL) has the potential to institutionalise the role of finance in India's EV transition. The PSL guidelines by the Reserve Bank of India (RBI) mandate that scheduled commercial

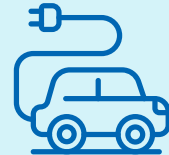
banks allocate specific levels of bank credit towards priority sectors (see the next section for more detail). In 2019, public-sector banks led by State Bank of India (SBI) requested priority sector recognition for retail lending to EVs. The Federation of Indian Chambers of Commerce and Industry (FICCI) and NITI Aayog have advocated for the same as well.¹⁷ Including EVs as a priority sector has potential to:



Increase investor confidence by providing an additional market signal that complements central and state governments' existing planning and policies.



Ensure a swift and equitable transition by guiding FIs to increase credit penetration in credit-deficient segments and use cases.



Accelerate EV adoption by instituting regulatory measures that help EVs access more finance.



Purpose of This Report

This report, Banking on Electric Vehicles in India, aims to:

- Outline the structure, mechanics, and history of PSL
- Propose considerations to inform the design of guidelines for including EVs in the PSL guidelines
- Summarise actions needed to implement and ensure the success of EVs as a priority sector

Overview of Priority Sector Lending and the Opportunity for EVs

What is Priority Sector Lending?

The Reserve Bank of India (RBI) introduced the priority sector lending (PSL) guidelines in 1972 to expand financial access to vulnerable sections of society by enhancing credit for “priority” sectors with high employment and poverty alleviation potential but low bankability.¹⁸

The guidelines mandate that banks subjected to the regulation direct a specified target percentage of

adjusted net bank credit (ANBC)¹⁹ to priority sectors (see Exhibit 5). Current priority sectors that can receive this credit include agriculture; micro, medium, and small enterprises (MSMEs); housing; renewable energy; education; social infrastructure; export credit; self-help groups and startups; and weaker sections of society. Of these, agriculture, microenterprises, and weaker sections have sub-targets that all banks are required to achieve. Also, different types of banks are required to meet different priority sector targets, based on their regional spread and access to priority sectors.

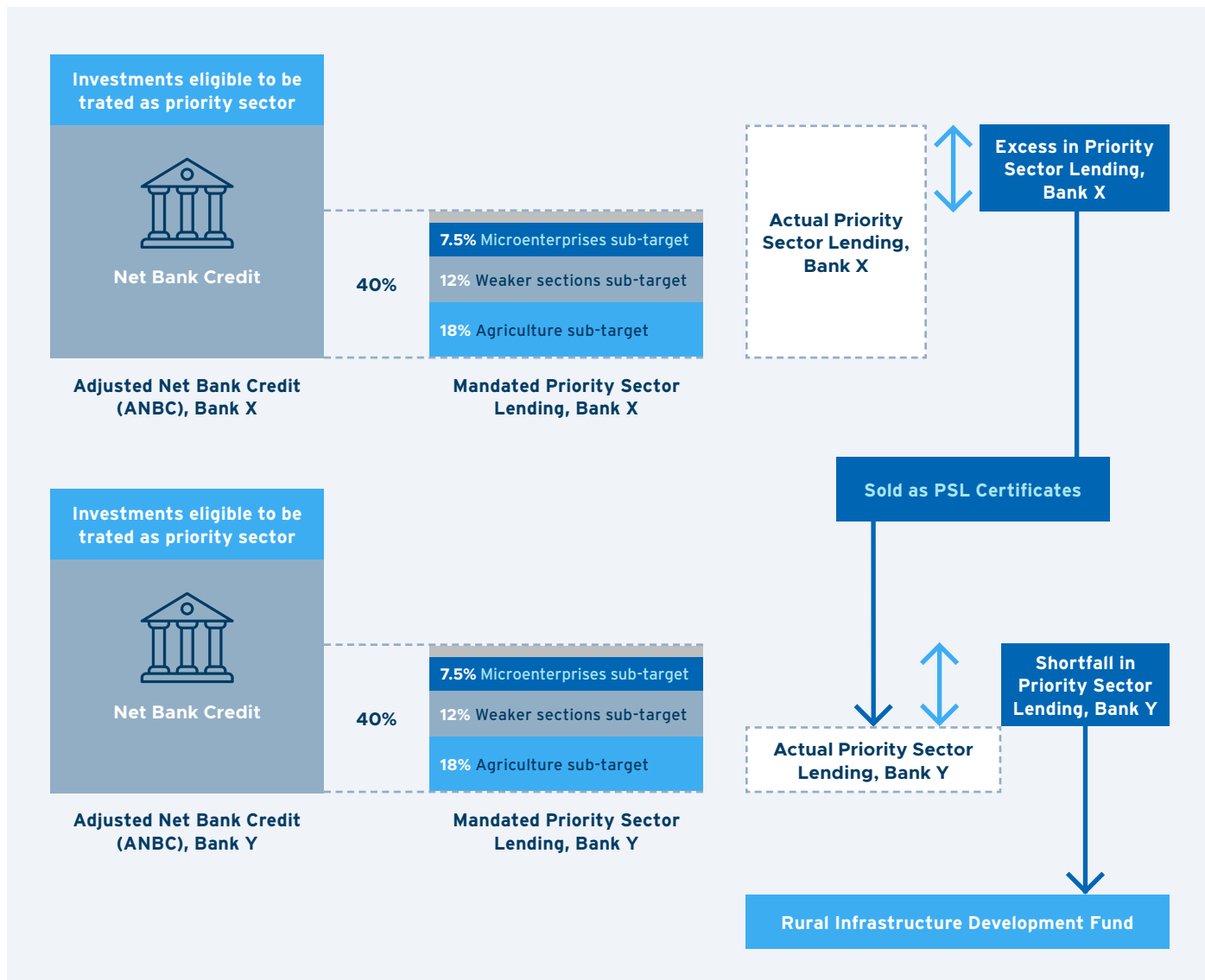
Exhibit 5 Targets and sub-targets set under priority sector lending²⁰

Category	Scheduled commercial banks (SCBs)		Regional rural banks	Small finance banks
	Domestic commercial banks (public or private) and foreign banks with over 20 branches	Foreign banks with less than 20 branches		
No. of banks	22 (private), 18 (public), 3 (foreign)	40	43	10
Target				
All priority sectors	40 percent of ANBC	40 percent of ANBC, of which at least 8 percent has to be lending to non-export categories.	75 percent of ANBC, of which up to 15 percent can be to medium enterprises, renewable energy, or social infrastructure	75 percent of ANBC
Sub-Target				
Agriculture	18 percent of ANBC, of which 10 percent is prescribed for small and marginal farmers	No sub-targets apply	18 percent of ANBC, of which 10 percent is prescribed for small and marginal farmers	18 percent of ANBC, of which 10 percent is prescribed for small and marginal farmers
Micro enterprises	7.5 percent of ANBC		7.5 percent of ANBC	7.5 percent of ANBC
Weaker sections of society	12 percent of ANBC		15 percent of ANBC	12 percent of ANBC

Tradable PSL certificates allow banks with excess lending to sell credits to banks that are unable to meet requirements (see Exhibit 6). Banks failing to comply

with targets and sub-targets are required to contribute shortfall to the Rural Infrastructure Development Fund at a predetermined interest rate.

Exhibit 6 Mechanism of PSL for Bank X with excess lending and Bank Y with shortfall in lending

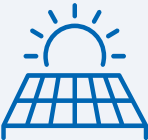


Inclusion of Clean Technologies under PSL

Off-grid solar and off-grid renewable energy solutions for households were included within PSL guidelines in 2012.²¹ In 2015, renewable energy was included as

a priority sector. This widened the scope of lending to larger installations and renewable energy-based public utilities. In 2020, the lending limit to both commercial and individual borrowers was doubled. Solar equipment loans were also introduced as eligible under agriculture lending. Exhibit 7 shows the current guidelines for clean energy technologies.

Exhibit 7 Inclusion of clean energy technologies in priority sector guidelines

Priority sector	Lending guidelines	Clean energy technologies included
 Agriculture	Solar equipment loans for farmers	<ul style="list-style-type: none"> • Installation of stand-alone solar agriculture pumps and for solarising grid-connected agriculture pumps • Installation of solar power plants on barren/fallow land or on stilts on agricultural land owned by farmer
 Renewable energy	Loans up to INR 30 crore for commercial borrowers and up to INR 10 lakh for households	<ul style="list-style-type: none"> • Solar-based power generators, biomass-based power generators, windmills, micro-hydel plants • Renewable energy-based public utilities (i.e., street lighting systems and remote village electrification)



Priority Sector Lending Trends

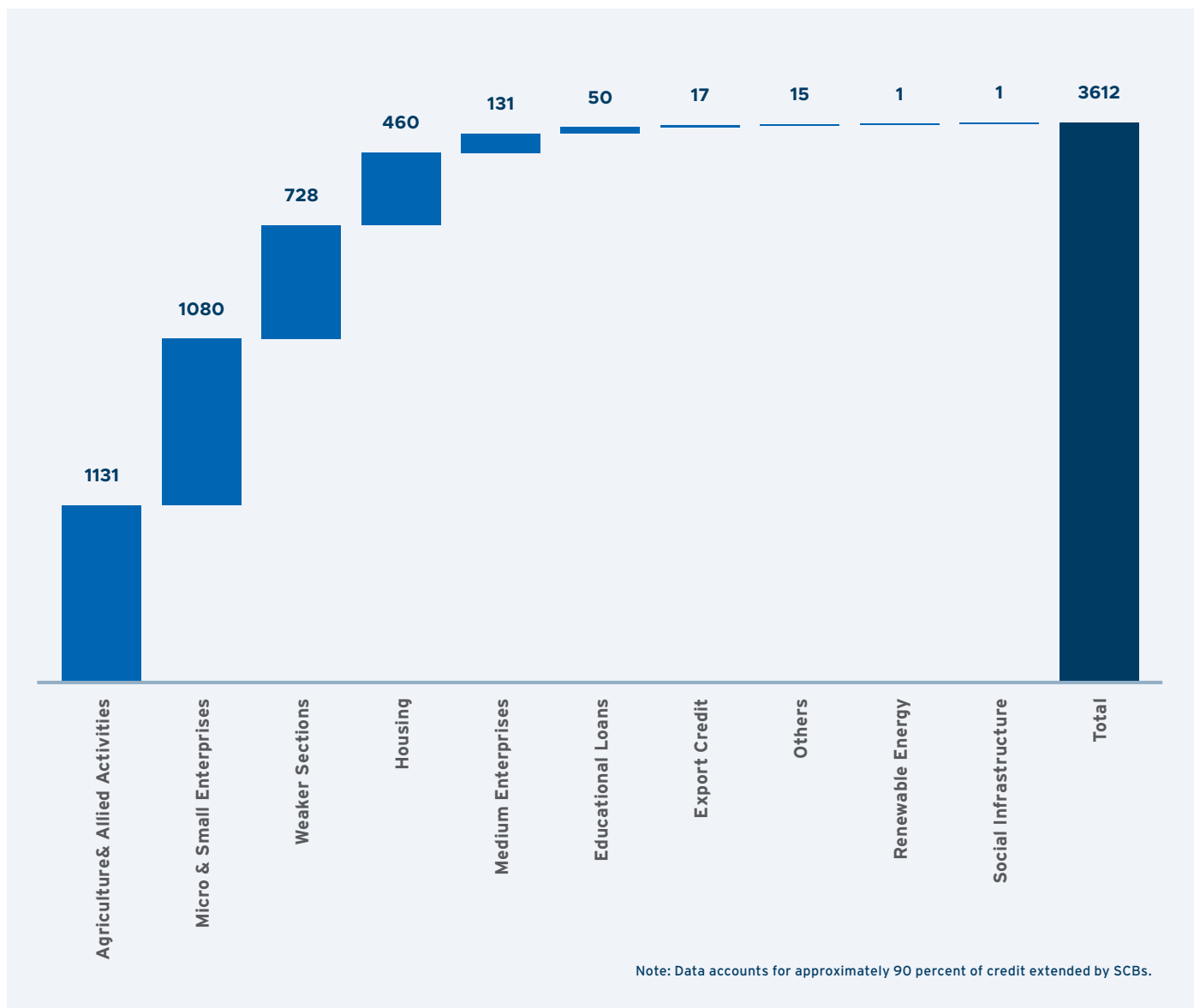
Current lending to priority sectors

In March 2020, India’s scheduled commercial banks (SCBs) had INR 36 lakh crores (\$US493 billion) in outstanding priority sector credit (see Exhibit 8). A large portion of this arose from sectors with mandatory sub-targets (agriculture, microenterprises, advances to weaker sections).

Different types of SCBs also lend differently across priority sectors depending on their geographical reach and risk appetites. For example, in March 2020, private domestic banks and foreign banks’ largest share of priority sector lending was to MSMEs. Public banks lent equally to agriculture and MSMEs. Small finance banks lent primarily to weaker sections of society.²²

Exhibit 8

Outstanding priority sector credit by SCBs as of March 2020 (in INR thousand crores)²³






Historic impact of priority sector lending

PSL is India’s directed credit policy—a regulatory instrument where governments mandate credit to sectors whose low returns and long gestation periods make for less lucrative investments in the short term.

In Japan, for example, directed credit promoted industrial growth in the 1950s and 1960s. Exhibit 9 shows how PSL has supported sectoral growth in India.

Exhibit 9

Historic impact of priority sector lending to sectoral growth

Relevant priority sector(s)	Impact of PSL	Case study
 <p>Export credit</p>	Higher supply of credit	Between 2001 and 2011, priority sector export credit grew around 20 percent year-on-year. In 2012, PSL guidelines were revised, and export was no longer a priority sector for foreign banks with more than 20 branches. As a result, credit fell by over 20 percent, showing the importance of PSL in incentivising banks. ²⁴
 <p>Agriculture</p>	More formalisation of credit	Prior to the PSL guidelines, 71 percent of agricultural credit came from informal moneylenders, and 4 percent from commercial banks. Three decades of PSL later, moneylenders provided 31 percent of credit while commercial banks provided 52 percent. ²⁵
 <p>All priority sectors</p>	Lower NPAs	Banks are often concerned with NPAs arising from risky priority sector assets. However, RBI data shows that priority sector NPAs declined from 51 percent of all NPAs in 2010 to only 27 percent in 2019. ²⁶

The Need for Priority Sector Status for EVs

Policy reforms are making EVs more economical than ICE vehicles on a total cost of ownership (TCO) basis for several segments and use cases (see Exhibit 10). Despite this improvement in economics, upfront cost

often still presents a barrier, as illustrated in Exhibit 11. When financing is available, high interest rates, short tenures, and low loan-to-value ratios present a significant burden. This is contrary to ICE vehicles which receive more affordable financing. Low-cost and increased financing will hence be critical to drive EV sales in the country.

Exhibit 10

TCO comparison for example segments and use cases




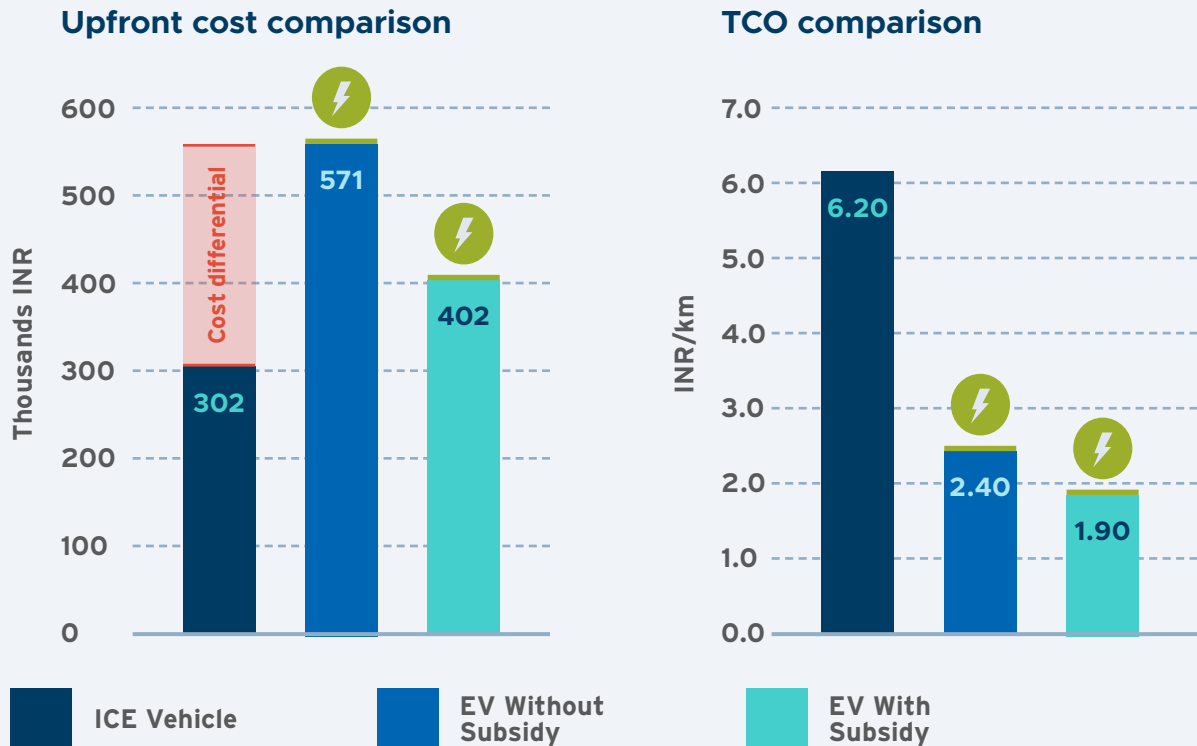
Segment	Use case	Case study
 <p>Two-Wheelers</p>	Goods delivery	Electric 2Ws used for goods delivery are cheaper on a TCO basis than ICE equivalents. ²⁷ With battery-as-a-service business models, upfront costs are lower as well.
 <p>Three-Wheelers</p>	Passenger (auto rickshaw)	Electric autos are close to TCO parity especially in tier 2 and tier 3 cities where shorter distances require smaller batteries. ²⁸
 <p>Cars</p>	Passenger (taxis)	In the case of Delhi, electric taxis travelling 160 km daily can achieve payback against diesel taxis in 1.9 years and against petrol taxis in 2.8 years. ²⁹

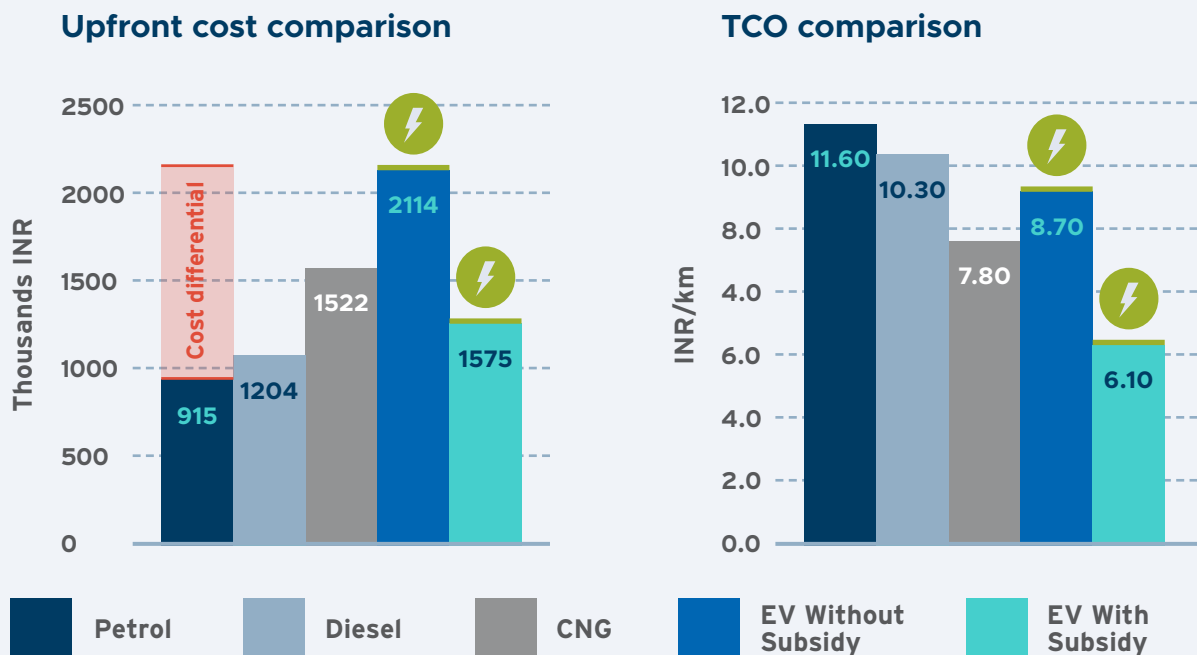
Exhibit 11

Upfront cost and TCO comparisons for example vehicle segments in Karnataka³⁰

3-Wheeler Auto-Rickshaws



4-Wheeler Commercial Passenger Vehicles



Priority sector status to EVs can address the lack of availability of finance. There is a strong case for EVs as livelihood-generating and supporting assets across urban as well as rural India, especially for economically weaker sections of society. Beyond enhancing accessibility that increases the opportunities for jobs/ accessing markets, the operational cost savings resulting from use of EVs over ICE vehicles enhance the income of users to utilise for other avenues such as healthcare, education, food, or housing.

With greater financing for EVs supplementing the supply side push from the central government, localisation will also increase, generating jobs in EV and related manufacturing. As an increasing number of aggregators moving towards electric fleets, the ridehailing and delivery use cases are also expected to see an increase in employment opportunities.

Simultaneously, electric vehicles present vast benefits to society, such as:



Improved public health

Approximately 5 lakh (500,000) EVs subsidised by the Delhi EV Policy can avoid 159 tons of fine particulate matter (PM2.5) over the lifetime of the vehicles.³¹



Reduced carbon dioxide emissions

EVs eligible under the FAME II scheme can abate over 74 lakh (7.4 million) tonnes of CO2 over their lifetime.³²



Enhanced energy security

EVs eligible under the FAME II scheme can result in oil import savings worth a cumulative INR 17.2 thousand crores (\$US2.3 billion) over their lifetime.³³

The Potential of PSL to Scale EV Finance

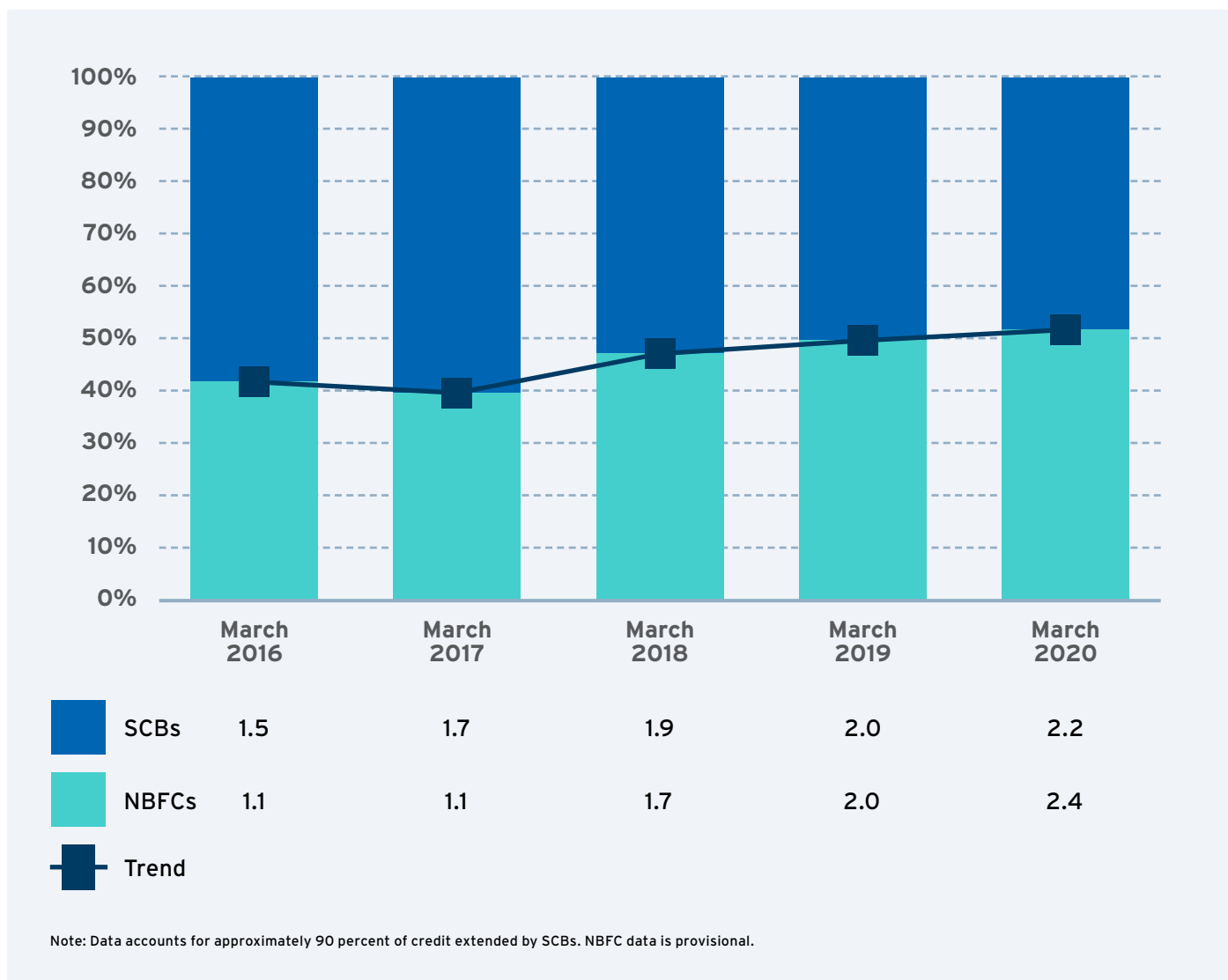
PSL inclusion can be an important near-term solution to scaling EV finance in the following ways:

1. Incentivising banks to lend to EVs: Inclusion can directly incentivise banks to enhance lending as a part of priority sector targets. Banks that have not yet ventured into financing EVs may consider doing so; banks that already finance EVs may be motivated to create specialised financing options with lower interest rates and longer loan tenures (e.g., SBI's Green Car Loan or Union Bank's Green Miles).³⁴ Overall, a mechanism to encourage a higher supply of credit can motivate borrowers opting for informal sources of financing (e.g., e-auto rickshaw drivers) to seek bank financing.

2. Improving access to finance for NBFCs: NBFCs will be important to expanding financing for EVs due to several factors. First, the vehicle finance market share of NBFCs has been increasing over the past five years, as illustrated in Exhibit 12. In 2016, NBFCs accounted for 43 percent of the formal vehicle financing market. By 2020, NBFCs had surpassed banks to account for 52 percent of market share. Second, NBFCs typically have a higher risk appetite and provide smaller pools of finance, many times in non-metropolitan areas. New fintech-based NBFCs have started enabling greater EV penetration in tier 2 and tier 3 cities.

However, NBFCs have been facing a liquidity crunch since 2017 that has been worsened by the effects of COVID-19. This may translate to EV-first NBFCs struggling to access low-cost finance from banks. The PSL guidelines allow for co-origination

Exhibit 12 Share and absolute number (in INR lakh crores) of outstanding vehicle finance advances, March 2016 to March 2020³⁵



of loans to the priority sector between banks and NBFCs.³⁶ Both entities thus share risks and rewards. Through this “co-lending model,” PSL inclusion for EVs could also benefit NBFCs, allowing them to leverage their greater on-ground presence while benefiting from banks contributing lower-cost funds.

3. Institutionalising the importance of EVs in India's financial industry: In addition to the direct impact of increasing formal supply of credit, constituting

EVs as a priority sector can help institutionalise the asset class into the industry. As with any new regulation or provision, banks will be encouraged to build up their understanding of EV technology, policy, and business models. This will be important when considering that limited awareness of the EV industry has led to greater risk perception and thus underfinancing.³⁷ Lending may be slower to pick up due to PSL inclusion, but the system-wide shift in mindset created could be a powerful catalyst in India's EV transition.

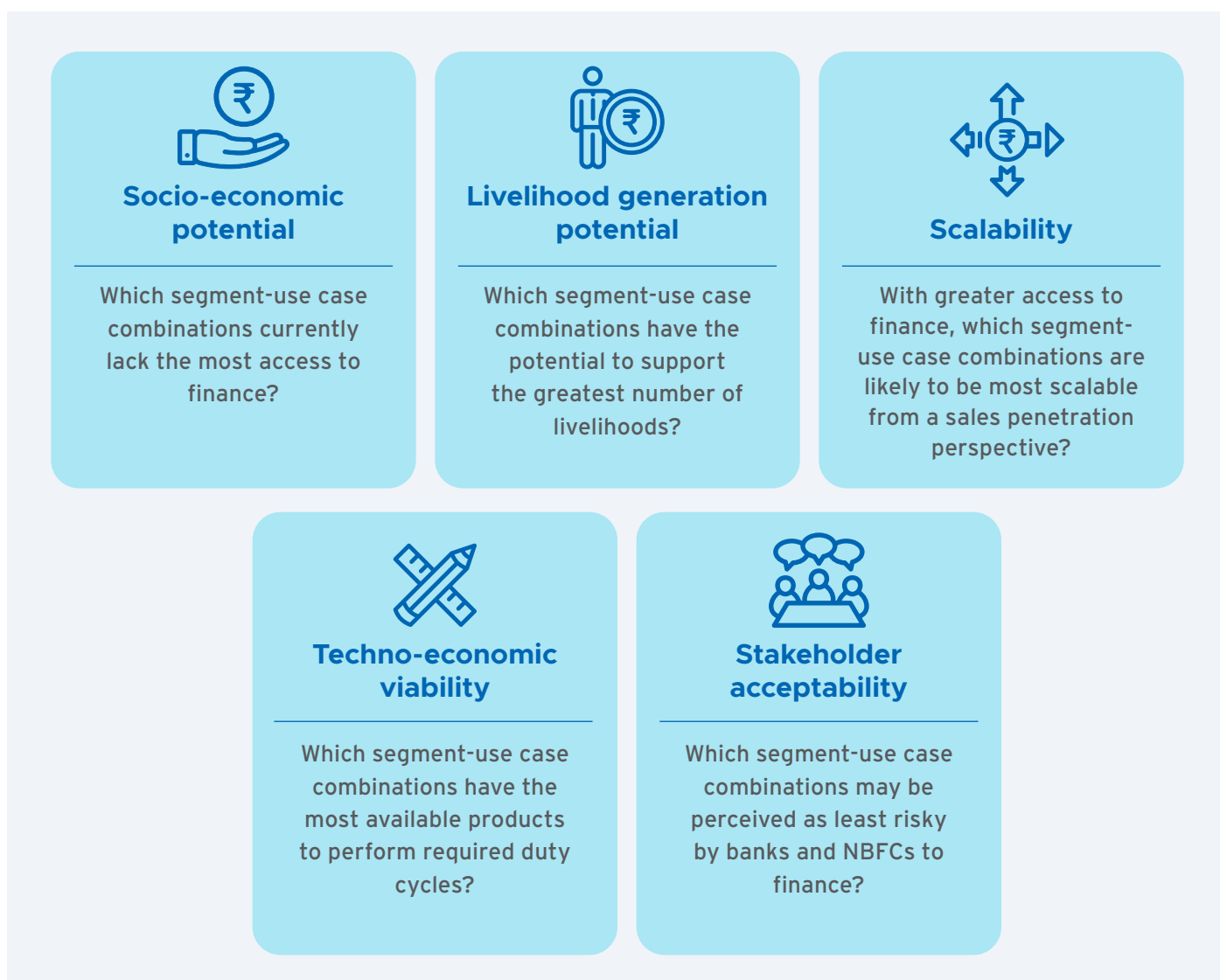
Design Considerations for Priority Sector Lending Guidelines for EVs

Key Considerations

Most priority sectors feature qualifying criteria for loans to ensure meeting PSL's goal of expanding financial access and supporting employment opportunities. This makes it important to consider the socioeconomics and scalability of

new amendments. Techno-economic viability of the segments and banks' receptiveness to the segments are also important to consider due to their influence on lending potential. Hence, to include EVs as a priority sector, parameters listed in Exhibit 13 must be carefully deliberated upon.

Exhibit 13 Parameters to assess segments for PSL inclusion for EVs



Assessment of PSL Inclusion

Methodology and results

A questionnaire survey was carried out to get expert input on the parameters and objective questions in Exhibit 13. Respondents to the survey included stakeholders representing financial institutions, OEMs, fleet operators, e-commerce, and civil society.

Respondents compared various segment-use case combinations and ranked options in response. Exhibit 14 builds off the survey results, proposing low, medium, and high ratings for EV segments and use cases for each parameter. The ratings should be considered as indicative only.

Exhibit 14 Assessment of EV segments and use cases for inclusion in the priority sector lending guidelines³⁸

E-2W	Private	Delivery
Socio-economic potential	Medium	High
Livelihood generation potential	Medium	High
Scalability	High	High
Techno-economic viability	High	High
Stakeholder acceptability	High	High
Remarks	E-2Ws have high sales forecasts, are the most economically viable, and have high model availability. When privately owned, they present low financing risk.	Although generating income for the buyer, e-2Ws used for delivery present higher financing risk, given reliability concerns expressed by operators. Availability of finance can influence purchase decisions.

E-3W	E-rickshaws and e-carts	Auto-rickshaws (passenger)	Carriers (delivery)
Socio-economic potential	High	Medium	High
Livelihood generation potential	High	High	High
Scalability	High	Medium	High
Techno-economic viability	High	Medium	Medium
Stakeholder acceptability	Medium	Medium	High
Remarks	E-3W ownership supports job creation but presents high asset and business model risk, which banks may be less receptive to financing. 3W financing currently is dominated by moneylenders; hence, PSL inclusion would be critical to scaling the sector. While EESL plans to lease e-3Ws in the near term, it will be important to build the financing capacity of the market simultaneously.		

E-4W	Private	Ridehailing	Commuter services	Carriers (delivery)
Socio-economic potential	Low	Low	Low	Medium
Livelihood generation potential	Low	Medium	Medium	Medium
Scalability	Low	Low	Low	Medium
Techno-economic viability	Low	Low	Low	Low
Stakeholder acceptability	High	Low	Low	Medium
Remarks	Private electric cars are the lowest-risk EV segment, thus highly acceptable by banks. PSL inclusion would likely scale the segment due to low credit-risk profile of buyers but hold back financing of other segments. Model availability is low; TCO parity exists, but the payback period may be long.	Ridehailing presents higher risk than the private use case, although it supports job creation. The techno-economic viability depends on extremely high utilisation of 200-plus km/day.	Commuter services are a prominent shared mobility use case; however, the borrowers are typically companies, with financing dependent on their balance sheets.	Model availability is low, especially given the high utilisation required.

E-Buses	Public	Private
Socio-economic potential	Low	Low
Livelihood generation potential	Low	Low
Scalability	Low	Low
Techno-economic viability	Low	Low
Stakeholder acceptability	Low	Low
Remarks	Borrowers are state transport undertakings or private operators. Loan ticket sizes are high, in addition to high financing risk.	

Lending limits

Another possible criterion that could be considered is lending limits for individuals and fleets. Lending limits are ticket size caps above which loans do not qualify as PSL. They ensure that large institutions and lower-risk borrowers do not disproportionately benefit from priority sector inclusion. They are important when higher cost assets are being financed. For example, beyond INR 30 crores (\$US4 million), bank financing for commercial solar installations does not qualify under PSL. Lending limits would be relevant for EV segments with a higher variation of cost to

concentrate priority sector lending towards mass-market adoption instead of small-scale adoption of luxury models.

The FAME II scheme already accounts for a similar maximum asset cost cap on eligible vehicles.³⁹ If exploring the inclusion of vehicles not covered by FAME II (e.g., private e-cars), the RBI could opt for a lending limit here. This would help enhance the scalability and socioeconomic potential of the inclusion.

Recommendations

There are a number of ways to combine the segments assessed above into portfolios of segments and use cases for PSL inclusion. Each combination has its benefits and trade-offs. Three options that we are proposing for consideration are:



Market-ready segments:

e-2Ws, e-3Ws, commercial e-4Ws



FAME II segments:

e-2Ws, e-3Ws, commercial e-cars, public e-buses



All light vehicles:

e-2Ws, e-3Ws, e-4Ws

The RBI may also consider including all segments of EVs under the PSL guidelines. However, lack of specificity may result in low-risk segments such as private e-cars also receiving priority sector loans. At this stage, the high ticket size and financing risk of e-buses may also make route 2 above less optimal. Focusing on the **market-ready segments** combination may thus offer the ideal starting point.

Other Key Considerations

It is important to note that PSL offers a largely voluntary pathway for banks. Increased lending is not guaranteed unless a sub-target is also implemented simultaneously.

Currently, bank credit to NBFCs for on-lending to agriculture and micro and small enterprises can be classified as priority sector lending if it meets certain pre-determined criteria. This provision will be valid until March 2022. If it were to continue past this date, EVs could also be included. This would allow the inclusion of EVs in the PSL guidelines to also extend to NBFCs, which are important lenders to vehicle finance.

Next Steps and Enablers

Initial Next Steps to Operationalise the Concept

Ultimately, getting from PSL recommendations to reform will require engagement of various stakeholders. The importance of a unified voice on PSL inclusion for EVs is exemplified by the example of renewable energy, in which the Ministry of New and Renewable Energy worked closely with other government ministries and commercial banks to advocate for PSL inclusion.⁴⁰ This administrative will and consensus building was essential to recognising renewable energy as a national priority and thus a priority sector for lending.

To include EVs in priority sector lending, a relevant government agency will need to take lead and liaise with the RBI. NITI Aayog is doing this and has submitted a proposal to the RBI.⁴¹ There is also a need to convene other ministries to discuss and align on the concept and the design of preliminary guidelines. Other stakeholders—such as state governments, FICCI, the Indian Banks Association, the Society of Manufacturers of Electric Vehicles, Society of Indian Automobile Manufacturers, e-commerce/logistics companies, and civil-society organisations—will be important to engage in the design process.

Once the RBI recognises the need for including EVs in PSL guidelines, it can constitute an internal working group to finalise the guidelines. It may consider inviting closed or public comments on proposed qualifying criteria via a consultative paper. Throughout this process, the lead government agency and other advocates will be responsible for driving further consensus for PSL inclusion among financial institutions and industry.

Enablers to Maximising the Impact of Inclusion

Including EVs as a priority sector is a crucial near-term solution to scaling financing. However, to maximise the

impact of the reform, supportive mechanisms will also need to be enacted simultaneously and in the medium-term. A few interventions that can work directly with PSL to rapidly increase lending are outlined below.

- 1. Sub-target for clean energy solutions:** Within the PSL guidelines, a sub-target encompassing renewable energy and EVs would incentivise lending in these sectors by creating a clear target and penalty mechanism for banks that fail to expand their lending to these sectors. This would serve to further institutionalise the importance of finance to the energy transition, and consequently, the importance of the energy transition to finance in India. Even at as low as 1-2 percent of ANBC, the finance mobilised towards clean energy solutions would be significant. At that scale, banks would be able to understand EVs more intuitively and embark on a faster curve to lower NPAs across the industry.
- 2. EVs included as an infrastructure sub-sector:** The Harmonised Master List of Infrastructure Subsectors, compiled by the Department of Economic Affairs, Ministry of Finance, provides financing and taxation benefits to predetermined subsectors in order to lower cost of credit and improve flexibility for investors.⁴² For example, subsectors with this 'infrastructure status' benefit from a higher limit on external commercial borrowings (allowing for cheaper funding in foreign currencies). They are also eligible for long-term loans and longer amortisation periods and can receive financing assistance from specialised agencies like the India Infrastructure Finance Company Limited.⁴³

Inclusion of electric mobility as an infrastructure subsector would create an enabling environment for large investments in the sector such as EV and battery manufacturing, charging infrastructure deployment, and electric bus rollout. With greater availability of financing upstream, the capital cost associated with EV ownership can be lowered,

improving the economic viability and affordability of EVs.

by the Ministry of Finance, can further support mainstreaming of EVs in the financial industry.⁴⁴

3. EV loans as a reporting category: Currently, no data is available regarding number of EV loans advanced, outstanding advances, or NPAs. This information asymmetry in the industry is a barrier to understanding financing patterns and thus improving the flow of finance. To solve this problem, RBI can incorporate EV loans as a unique reporting category under personal loans in the Basic Statistical Returns (BSR). Additional modes of data collection where EVs can be included as a sector include the Sector-wise and Industry-wise Bank Credit (SIBC) returns, and the Supervisory Returns for NBFCs. This data can then be aggregated and shared via RBI's Database on the Indian Economy.

In the long term, constituting EVs as a separate reporting category may also create a market for specialised EV loan products with lower interest rates and longer tenures. A supportive taxonomy on sustainable finance, already being worked on

4. Loan guarantee programs: Priority sector lending helps improve supply of credit but does not directly address challenges such as interest rates and equated monthly instalments. In the short term, interest rate subventions can play this part, as the Delhi EV Policy has demonstrated through its proposed subvention scheme. In the medium to long term, there must continue to be a focus on solutions that reduce inherent risks. For example, loan guarantees covering specific risks have the potential to increase liquidity in the EV sector alongside PSL. Multilateral financiers or national development banks can offer such guarantees to banks and NBFCs in India with predetermined lending terms.⁴⁵ The NITI Aayog and World Bank first-loss risk-sharing facility is a significant move in this direction. The risk cover will provide banks with greater confidence in lending and in turn improve offtake of priority sector provisions for EVs.

Exhibit 15 Wider interventions to unlock EV finance⁴⁶

Stakeholders beyond the financial industry can also implement complementary initiatives to PSL and enable greater financing for EVs:

- **OEMs:** Product guarantees from OEMs can assure financiers of the product quality and performance of EV models. Warranties for OEMs can cover the repairs and replacement of parts, ensuring buyers are not presented with additional costs. Buyback programmes where OEMs guarantee repossession and resale can create clarity around resale value. Battery OEMs can similarly lead in the creation of battery repurposing and recycling programs.
- **Aggregators and e-commerce providers:** Fleet aggregators, delivery companies, and e-commerce providers can provide credit guarantees and utilisation guarantees to driver-partners. This can enhance the confidence of financiers in providing loans for this use case. More broadly, electrification targets through initiatives such as EV100 can create ambitious market signals for policy, manufacturing, as well as financing.
- **State governments:** State EV policies can galvanise OEMs, aggregators, and e-commerce through the establishment of state-level targets. Interest rate subvention schemes can create an early learning curve for financiers, especially on high-risk segments such as e-3Ws. Incentives for OEMs to assure buybacks and warranties can also be offered.

Conclusion: Helping India Bank on EVs

Incentives, investment, and innovation are driving India's rapidly increasing EV adoption. Finance will be critical to achieving scale. However, the real and perceived risks of a relatively new asset class have meant that financial institutions like banks and NBFCs have not yet built up their confidence or capabilities of financing the sector.

India's EV finance market could reach INR 3.7 lakh crores (\$US50 billion) in advances by 2030.⁴⁷ Priority sector lending can be a crucial pathway to helping realise this potential. If designed well, it can incentivise banks to finance EVs and improve finance for NBFCs,

while institutionalising the importance of the EV sector within the financial industry. Considering socioeconomic potential, livelihood generation potential scalability, technoeconomic viability, and stakeholder acceptability, market-ready electric 2Ws, 3Ws, and commercial 4Ws currently offer the ideal starting point for PSL inclusion.

To enable this reform, several actors will need to align on a vision and also consider supplementary solutions. Implementing the solutions outlined in the report can help maximise the impact of PSL inclusion for EVs. Most importantly, these solutions are mutually beneficial for all:



EV buyers

Greater flow of and lower cost of financing will yield higher sales that can reap economic, social, and public health benefits.



EV industry (OEMs, fleet owners/aggregators)

PSL inclusion and consequent boost to EV finance will result in improved EV demand and sales.



Banks and NBFCs

Proactively financing EVs will showcase financial institutions' ESG credentials, unlocking better priced better-priced debt financing going forward.



Reserve Bank of India

Reforming PSL to promote green lending will reinforce RBI's commitments as a member of the Network for Greening the Financial System.⁴⁸



Government of India

Creating an enabling environment for EV adoption will be key to India's development goals. Focusing on EV finance will also support India's ambition to decarbonise its vehicle stock, aligning with its target of net-zero emissions by 2070.

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