

Investment Opportunities under Voluntary Vehicle- Fleet Modernization Policy (VVMP)

Information Collateral for Registered
Vehicle Scrapping Facilities (RVSF)

KEARNEY



V-VMP is aimed at creating an eco-system for phasing out of unfit and polluting vehicles

Objectives of Voluntary Vehicle-Fleet Modernization Policy (VVMP)

1		Reduce pollution by scrapping 1 Cr+ old and unfit vehicles
2		Improve road, passenger and vehicular safety
3		Boost auto sector sales and generate employment
4		Improve fuel efficiency and reduce maintenance cost for vehicle owners
5		Formalize the currently informal vehicle scrappage industry
6		Boost availability of low-cost raw materials for automotive, steel and electronics industry

The policy targets voluntary scrapping of unfit commercial and passenger vehicles strictly based on their fitness, irrespective of vehicle age

Commercial Vehicles (CVs)



- Registration of vehicles is linked to **validity of the fitness certificate**
- CVs undergo fitness test **every 2 years** for first 8 years and annually thereafter

Private Vehicles (PVs)



- First registration is valid for **15 years**
- Valid fitness certificate is **necessary for renewal** of registration after 15 years. Renewal is valid for 5 years

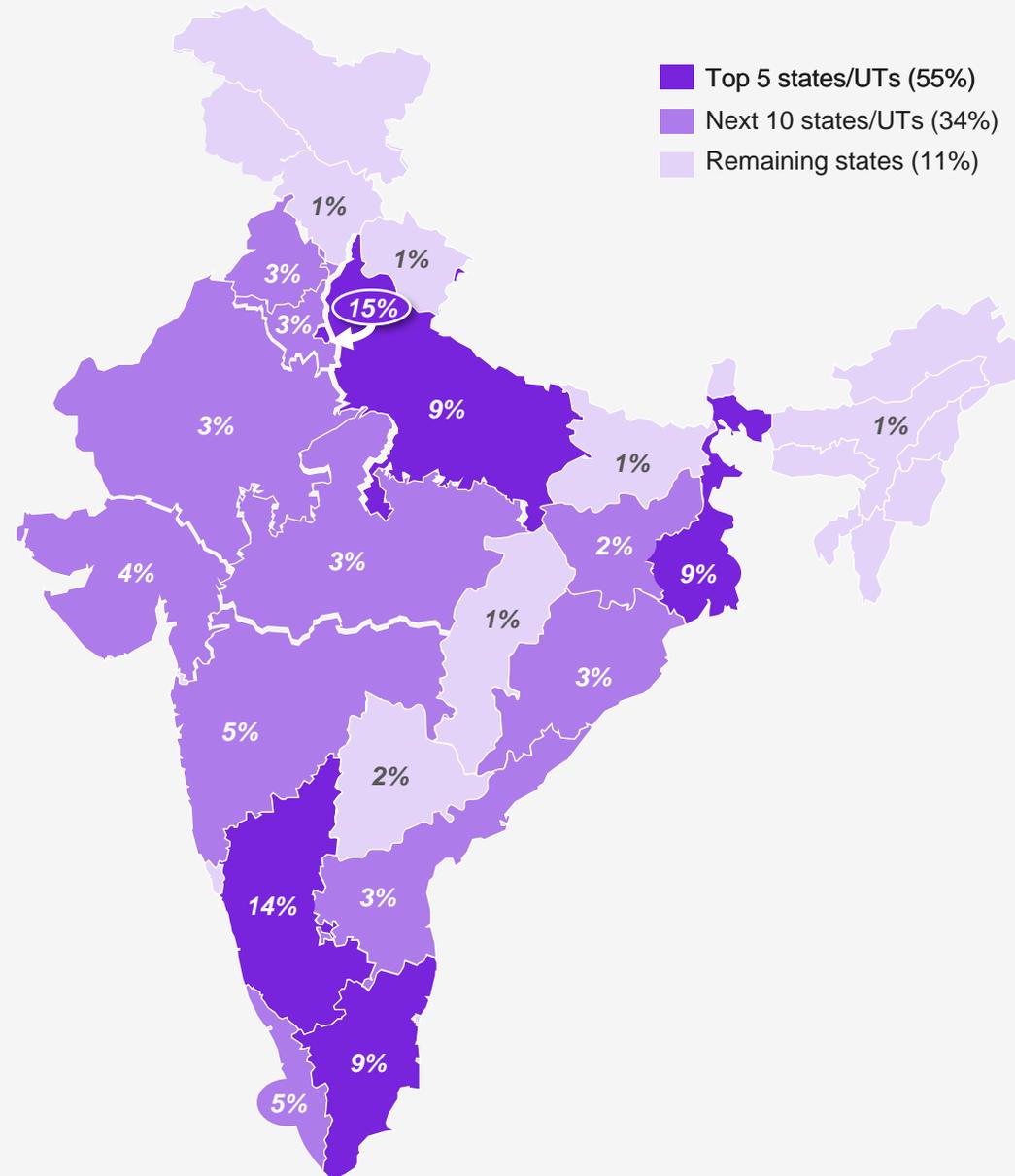
Fitness has been mandated through Automated Testing Stations (ATs) for vehicles

- From 1st April 2023, fitness testing for **Heavy Goods Vehicles/Heavy Passenger Motor Vehicles** shall be **mandated through ATs** only
- For **Medium Goods Vehicles/Medium Passenger Motor Vehicles and Light Motor vehicles** (Transport), fitness testing shall be **mandated through ATs** from 1st June 2024

If a vehicle fails an automated fitness test, one re-test after the necessary repair/rectification, and the re-inspection if ordered by the Appellate Authority, it will be declared an End-of-Life Vehicle (ELV)

Currently, there are **1 Crore+** End-of-life vehicles (ELVs) estimated across India; Top 10 states account for **~75%** of the ELV load

Distribution of ELVs across India



Key highlights

- **1 Crore+** ELVs are estimated to be without valid registration & fitness certificate across India
- These ELVs include **4 wheelers and medium and heavy commercial vehicles**

States/UTs	# ELVs (in lakhs)
Delhi	17.5 (15%)
Karnataka	17.3 (14%)
Tamil Nadu	10.8 (9%)
Uttar Pradesh	10.4 (9%)
West Bengal	10.3 (9%)
Kerala	6.5 (5%)
Maharashtra	5.8 (5%)
Gujarat	4.3 (4%)
Punjab	4.1 (3%)
Haryana	3.9 (3%)
Total	91 (76%)

To implement the policy, RVSFs and ATS would be set up across the country



Registered Vehicle Scrapping Facility (RVSFs) for scientific and environment-friendly disposal of end-of-life vehicles



Automated Testing Station (ATS) for automated fitness testing of vehicles without any manual intervention

Focus of the document

Registered Vehicle Scrapping Facilities (RVSFs) are required to be set up to promote safe scrapping of vehicles and enhance value recovery

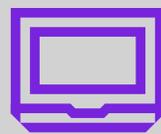


CPCB Guidelines



Priority to safe operations

Environment friendly & safe scrapping of vehicles as per **CPCB¹ & SPCB² guidelines**



Technology Driven

Access to **NCRB³** for vehicle verification & **integration with VAHAN** for vehicle de-registration



Enhanced Value Discovery

Use of **scientific scrapping process** to enhance the value recovery rate to **global standards of 90-95%** from the current recovery rate of 75%



Collaboration with existing value chain

Collaboration with **informal players to setup collection centres** for ELVs & with **MSTC Ltd.** for sourcing of ELVs & e-auction of scrap

60-80 RVSFs required across the country over the next ~5 years to cater to the vehicle scrapping demand

1 CPCB: Central Pollution Control Board
2 SPCB: State Pollution Control Board
3 NCRB: National Crime Records Bureau

Notifications concerning regulation of Registered Vehicle Scrapping Facilities have been issued by MoRTH

Notifications issued by MoRTH

#	Final Notifications	To be effective from
1	Registration and Functions of Vehicle Scrapping Facility Rules, 2021	25 th September 2021
2	Rules for recognition, regulation and control of Automated Testing Stations	
3	Revision of registration, fitness certificate and fitness testing fee	1 st April 2022
4	Concession in motor vehicle tax for vehicles bought against certificate of deposit	

#	Draft Notifications	To be effective from
1	Mandatory scrapping of government vehicles older than 15 years	1 st October 2022
2	Mandatory automated fitness testing for heavy commercial vehicles from 1 st April 2023 and for medium and light commercial vehicles from 1 st June 2024	1 st April 2023

RVSF specific notifications

Through these notifications, specific measures have been taken to encourage ELV owners to scrap their vehicles

Measures taken to encourage ELV owners to scrap their vehicles



All incentives and benefits for purchase of new vehicles linked to a **tradeable Certificate of Deposit (CD)** issued by **RVSF** on receipt of **ELV**



Incentives for new vehicles purchased against ELVs:

- 1) **Waiver of registration fees,**
- 2) **Concession on road tax** of up to 25% on non-transport vehicles & up to 15% on transport vehicles
- 3) **Discounts from auto OEMs** (advisory issued to **SIAM** for 5% discount)



Responsibility of complete **deregistration process with RVSF**; ELVs registered in any state/UTs can be scrapped at **any RVSF** in the country



Increased fees for **re-registration, fitness test** and **issuance of fitness certificate** for vehicles older than 15 years



Complementary disincentive measures suggested to the states/UTs:

- 1) Implementation of **Green Taxes** (Advisory issued to states on 2nd Feb 2021)
- 2) Implementation of **low emission zones within the cities**

Clear and detailed guidelines have been published for setting up Registered Vehicle Scrapping Facilities (RVSFs)

Application process for grant of registration certificate for an RVSF

Application for grant / renewal of Certificate of Registration for RVSF to be made to the **Registration Authority**¹ along with



- Processing Fee: INR 1,00,000
- Security Deposit: INR 10,00,000

State/UT government will clear the proposal **within 60 days** else the proposal would be **deemed approved**



The NSWS portal has been **setup by Central government** and used for

- **Internal approvals** from state agencies (Labor, Pollution etc.)
- **Inspection and audit reports** of RVSF
- Approval from any other department necessary to establish/operate RVSF

Registration certificate issued to be **valid for a period of 10 years** from the date of issuance or renewal, as the case may be



The applicant must seek necessary approvals from state authorities



Consent from state authorities to establish and operate RVSF, approval for plant layout and building plan



Quality certifications of ISO 9001²/ ISO 14001³/ISO 45001⁴ **within 12 months** of starting operations



Consent to operate from **State Pollution Control Board (SPCB)** within 6 months of starting operations



Undertaking to abide by **existing laws/Acts/Rules/Standards** etc.



Evidence of **adequate useable area** in orange category with **approved plant layout** and building plan



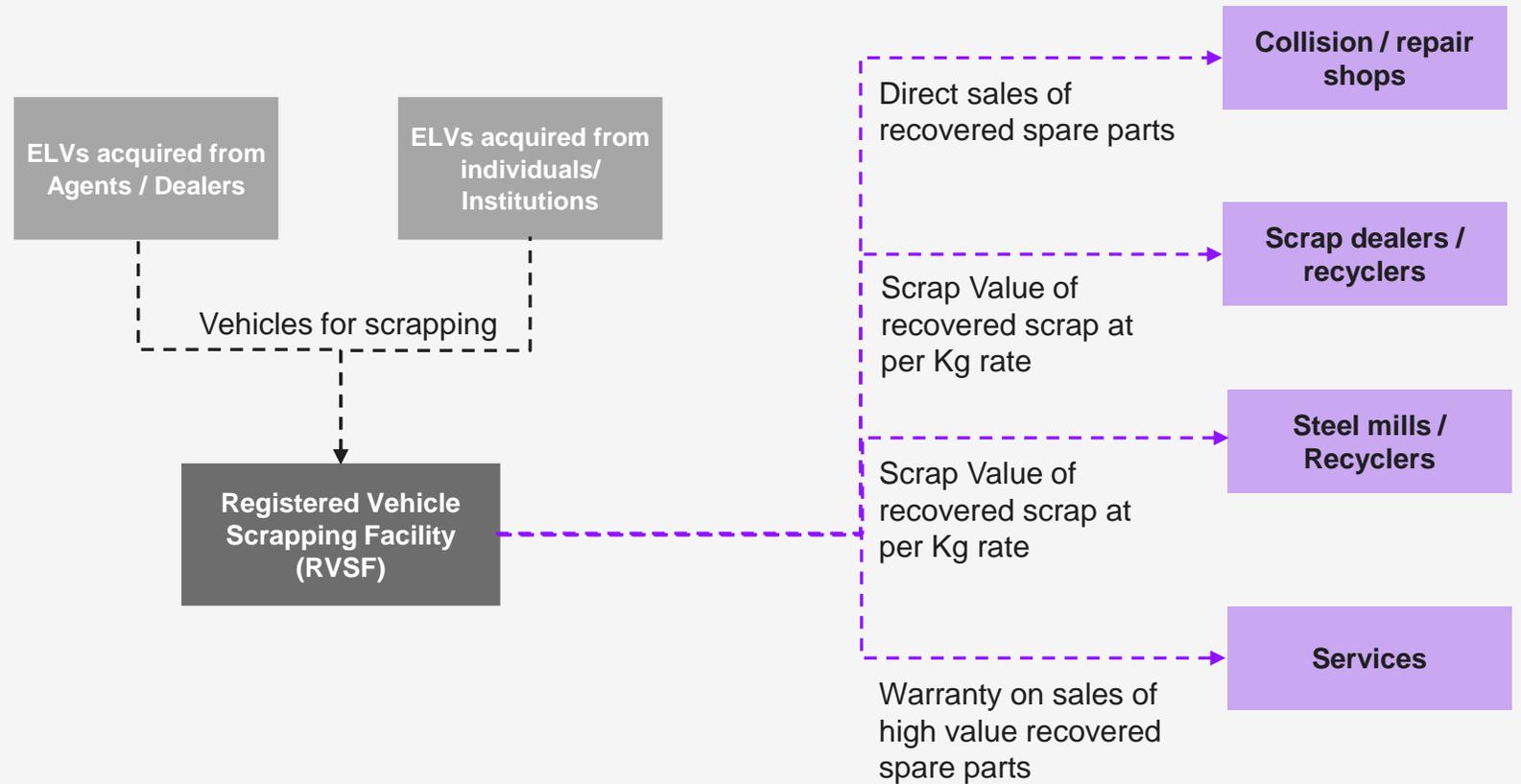
Evidence of **certified depolluting and de-risking equipment**

1. Transport Commissioner or any other Officer designated by the Government of the State/UT
2. Quality management system
3. Environmental certification
4. Occupational health and safety

Vehicles for scrapping are the key input to an RVSF; Post processing, RVSF earns from sale of spare parts + scrap value of recovered metals

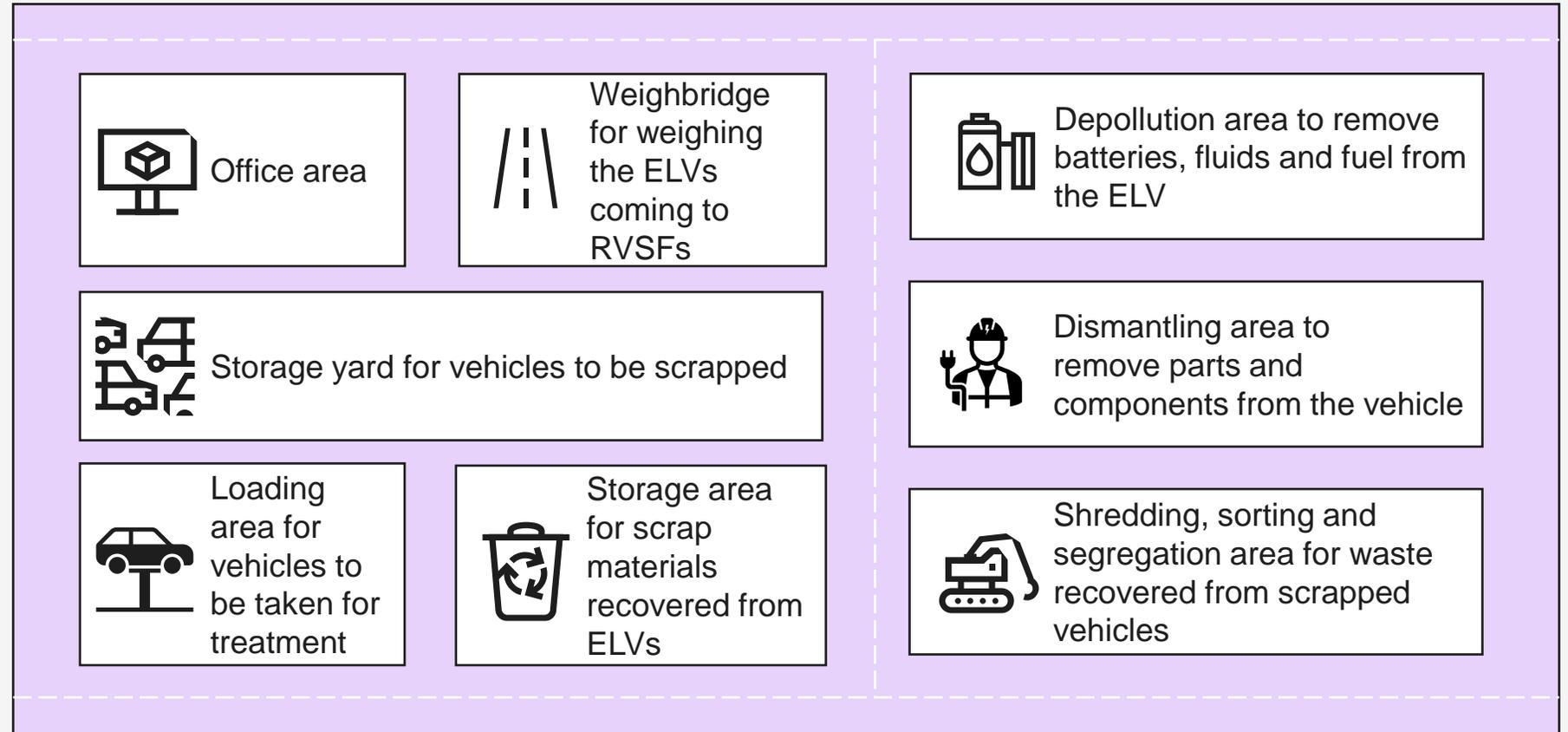
Detailed [video](#) showing operations of an RVSF

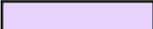
RVSF Operating Model



A typical RVSF has designated areas for storage, vehicle weighing, loading, depollution, dismantling and sorting

Block Layout of RVSF



 Vehicle movement area

2 archetypes of RVSF are possible to cater to varied ELV volumes across the country

	Archetype 1: Small RVSF	Archetype 2: Medium RVSF
 Annual Capacity¹ <i>(adjusted for utilization)</i>	28,000 ELVs	50,000 ELVs
 Area required	4-6 acres	7-10 acres
 Radius of business operation²	100-150 km	200-250 km

To study the feasibility of an RVSF, a business case has been prepared by **studying the operations of existing scrapping facilities** in detail and deriving key assumptions from industry benchmarks

Our assessment of RVSF business has been modeled on a conservative approach building-in a slow growth in capacity utilization of facilities

The flow of ELVs to the RVSF has been modeled for a conservative case

Metric	Rationale / Assumption
<p>Slow growth in capacity utilization of facilities</p>	<ul style="list-style-type: none"> – The model assumes a slow growth in capacity utilization of RVSF facilities starting with 20% in FY24 to a maximum of 80% in FY27 which is maintained in the steady state. – The rationale behind this is two-fold: <ul style="list-style-type: none"> – Education of ELV owners to scrap their vehicles will be gradual – Push from policies and impact of mandatory automated fitness testing will support steady increase in utilization over the next 3-4 years
<p>Type of vehicles scrapped</p>	<ul style="list-style-type: none"> – The business case caters to 2/3 wheelers (25%), 4 wheelers (63%) and medium and heavy commercial vehicles (12%). The investor may choose to scrap a higher share of 4 wheelers and MHCVs providing better realizations when ELV supply stabilizes in steady state
<p>Recovery rate of ferrous metal content</p>	<ul style="list-style-type: none"> – The rate of recovery of ferrous metal content is taken to be 70% in FY24 with a steady improvement to a conservative 75% by FY36. – With deployment of scientific techniques of scrapping, the recovery rates can be improved to 90-95% (global standard).

For the private investor, a potential IRR of ~15% is achievable for both RVSF archetypes over 25 years of operation

Financial Assumptions:

Financial Metric	Value (%)
WACC ¹	11%
Tax rate	25%
% of debt in CAPEX ²	70%
% of equity in CAPEX	30%
Interest rate	12%
Cost of equity	15%
Loan repayment period	25 years

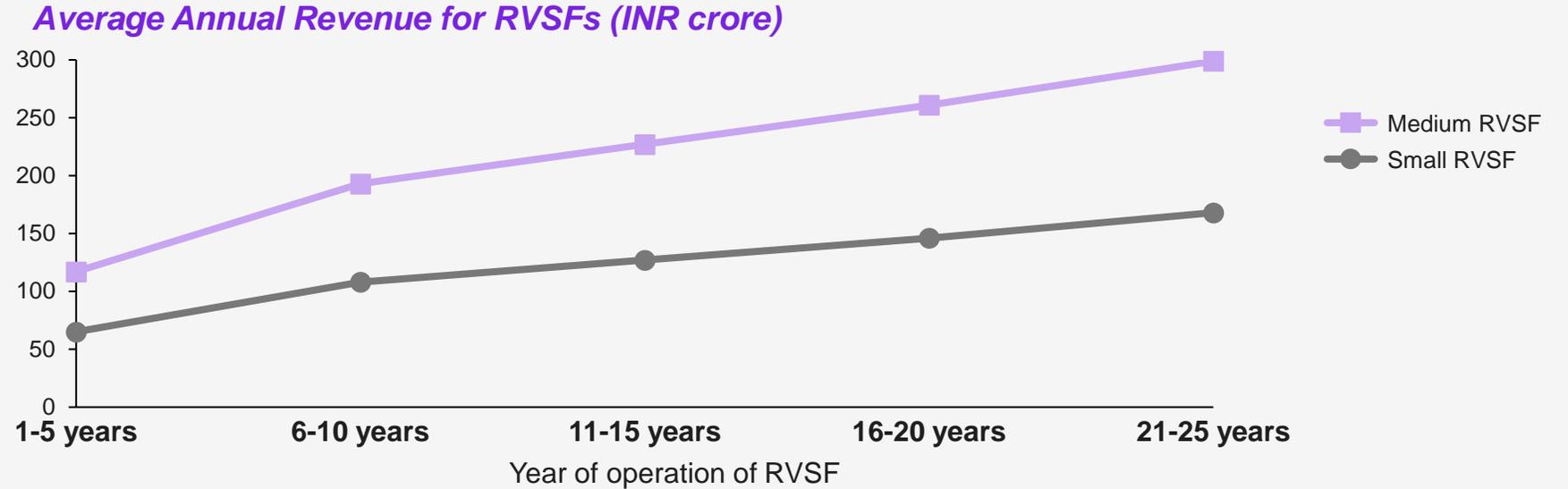
Summary of investment return for 25 years of RVSF operations

	Archetype 1: Small RVSF	Archetype 2: Medium RVSF
Overall Project		
Capacity →	28,000 annual capacity	50,000 annual capacity
NPV³ (INR Cr) <i>(Free Cash Flow to project)</i>	8-10	16-20
Project IRR⁴ %	14-16%	14-16%
Equity Investor		
NPV (INR Cr) <i>(Free Cash Flow to equity)</i>	7-9	14-18
Equity IRR %	15-17%	15-17%

1. Weighted Average Cost of Capital
 2. Capital Expenditure
 3. Net Present Value
 4. Internal Rate of Return

Both RVSF archetypes are expected to reach positive PAT% by the 7th year of inception

The two archetypes of RVSFs have been studied in detail for financial feasibility



Key business metrics - model RVSF		
Metrics	Small	Medium
Capacity ('000 ELVs) (<i>adjusted for utilization</i>)	28	50
Capex (₹Cr)	12-14	20-22
Revenue ¹ (₹Cr)	105-120	195-210
Opex ¹ (₹Cr)	100-110	190-200
EBITDA % ¹	2-3%	2-3%
First year of profit	~Year 7	~Year 7
Break even year of operation basis free cash flow	~ Year 7	~ Year 7

Business assumptions detailed here



Several ease of doing business measures have been taken for seamless onboarding and convenient daily operations of private investors



All RVSF applications will be processed through a **central single window clearance portal**



States/UT government will clear the applications **within 60 days** else the proposal would be **deemed approved**



All operations of RVSFs will be **digital** and **linked to Vahan**



RVSF established in a State/UTs can **accept and scrap vehicles** registered in any of the States/UTs



Certificate of deposit and certificate of vehicle scrapping will be **generated electronically** and will be **accessible in Vahan**



Automatic intimation to RTOs for RC cancellation after vehicle is scrapped;
No requirement for physical visits to RTOs

Thank you



Appendix

RVSF Business Model – Assumptions

S No.	Item	Value	Rationale / Source
1	ELV procurement cost	68-73% of revenue	– Inputs from existing scrapping facilities
2	Direct cost	16-19% of revenue	– Includes direct labor, utilities, logistics, and repair and maintenance expenses – Based on primary research with existing scrapping facilities and automobile industry benchmarks
3	Indirect cost	6-7% of revenue	– Includes land rent, waste management cost, and other selling, general & administrative expenses – Based on assessments of existing scrapping facilities and automobile industry benchmarks
4	Initial capex for setting up RVSF	INR 12-14 Crore	– Equipment: weight bridge, baler machine, radiation detectors, A/c freon gas machine, depolluting and dismantling machines, forklift machine – Civil work: office, parking space, landfill, spare parts storage, metal scrap storage, liquid waste storage
5	Revenue realization	– INR 1,000-2000 per 2W and 6,000-7,000 per 3W – INR 20,000-25,000 per LMV, LCV – INR 1.3-1.5 Lacs per MHCV	– Based on estimates from existing scrapping facilities

Note:

- Yearly inflation of 5% in salaries and 3% in other operating costs assumed
- Yearly increment of 3% assumed in average realization from ELVs
- Revenue realization also includes 5-20% revenue from spare parts and 80% utilization
- ELV volume includes 63% volume from LVs, 13% from MHCVs, 22% from 2W and 3% volume from 3W as per inputs from RVSF owners
- LMV – Light motor vehicle, LCV – Light commercial vehicle, MHCV – Medium and Heavy commercial vehicle

RVSF equipment requirement

RVSF Equipment description and per unit costs

Sr. No.	Equipment name	Per unit cost (in INR)
1	Baler	2 – 2.5 Cr
2	Depolluting Machine	15 – 20 L
3	Tilting Machine	15 – 20 L
4	Radiation Detector	30 – 40 L
5	Weighbridge	2.5 – 4 L
6	Forklifts	7.5 – 11 L
7	Cranes	1.25 – 5 L
8	Eddy Current Separators	2 – 4 L
9	Drum Magnets	1 – 2 L

Ancillary Equipment description and per unit costs

Sr. No.	Equipment name	Per unit cost (in INR)
1	Shredder/ Hammer mill	20 – 25 Crore (combined cost)
2	Cyclone Separators	
3	Magnetic Separators	

Non-Exhaustive



RVSF equipment



Weighbridge



Baler



A/C Freon Gas Machine

Non-Exhaustive



Forklift



Tilting Machine



Radiation Detector



Motor Vehicles (Registration and Functions of Vehicle Scrapping Facility) Rules



सत्यमेव जयते

सड़क परिवहन और राजमार्ग मंत्रालय
Ministry of Road Transport and Highways



What do these rules cover?

1. Scope of these rules
2. Powers and obligations of an RVSF
3. Eligibility criteria for setting up an RVSF
4. Registration procedure and validity of registration for RVSF
5. Criteria for scrapping vehicle at an RVSF
6. Scrapping procedure to be followed at RVSFs
7. Rules for scrapping yard in an RVSF
8. Audits and certifications of an RVSF
9. Appeal by RVSFs

1 Scope of RVSF Rules

Formulated under sub-section (4) of section 59 and clause (p) of section 64 of the **Motor Vehicles Act, 1988**



These rules lay down the **procedure for setting up, authorization and operation of an RVSF**



Applicable for all categories of vehicles and their last registered owners



These rules are **applicable to entities** such as automobile collection centres, automotive dismantling, scrapping and recycling facilities



These rules are **effective from 25th September 2021**



Motor Vehicles (Registration and Functions of Vehicle Scrapping Facility) Rules



2

Powers and obligations of RVSF

Provided with connectivity and access to **VAHAN database**

Authorized to make relevant **entries in Vahan regarding scrapping of vehicles** and issuance of certificates

Provided with connectivity to verify records of vehicles with **database of the stolen vehicles**, held by NCRB and local Police

Required to carry out **verification of stolen vehicle** or vehicle involved in criminal activity, before scrapping a vehicle

Liable to conduct **verification of persons handing over the vehicle** for scrapping

Eligible to accept and **scrap vehicles registered in any of State/UT** under the jurisdiction of any Registration Authority

Required to **digitally remit or pay by an account payee cheque** the agreed consideration for the vehicle

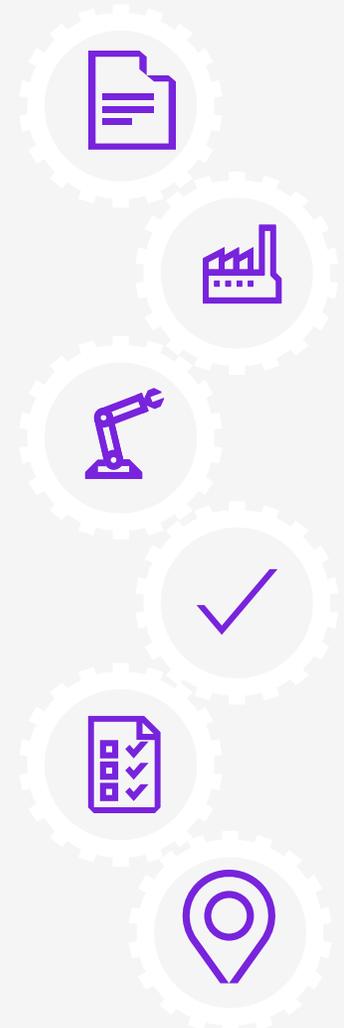
Motor Vehicles (Registration and Functions of Vehicle Scrapping Facility) Rules



3

Eligibility criteria for setting up and operating an RVSF

RVSF may be owned and operated by any legal entity, be it a person, firm, society, company or trust established in accordance with law, provided the following conditions are met:



Approval for **consent to establish** from the State Registering Authority

Fulfil **technical requirement for collection and dismantling centres** as per Central Pollution Control Board (CPCB) guidelines

Competent manpower and appropriate equipment to carry out the depollution and dismantling activities in a safe and environmentally responsible manner

Consent to Operate from State Pollution Control Board (SPCB) , **within six months** of commencement of operations

Quality certifications of ISO 9001/ 14001/ 45001 **within twelve months** of commencement of operations

Availability of adequate **land in the orange category industrial zone** of the State/ Union Territory

Registration procedure and validity of registration for RVSF



Application as per Form 1 of RVSF rules should be submitted to the Registration Authority of the State/UT along with:

- Non-refundable processing fee of INR 1,00,000/-
- Refundable EMD bank guarantee of INR 10,00,000/-



Registration issued will be **valid for 10 years** and shall be **renewable for another 10 years**



All applications for **registration/renewal of registration of RVSFs** will be facilitated through a **Single Window Portal (NSWS)** hosted by the **Central Government**



State/UT Government shall clear the application **within 60 days** including approvals from various State agencies else the application would be **deemed approved**

5

Criteria for scrapping vehicle at an RVSF

The RVSF rules lay out various criteria for RVSFs to accept vehicles for scrapping



Private vehicles which have **not renewed** their **certificate of registration**

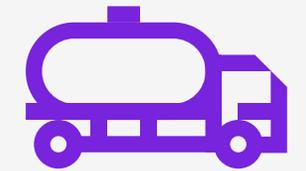
Commercial vehicles which have not been **granted a certificate of fitness**

Vehicles declared obsolete or beyond economic repair by the Central/State Organizations of the government and offered for scrapping

Vehicles damaged due to fire, riot, natural disaster, accident or any calamity, or self certified as scrap by registered owner

Vehicles offered voluntarily for scrapping at the discretion of the owner

Vehicles bought by any agency including RVSF in an **auction for scrapping vehicles**



Vehicles which have outlived their utility particularly for projects in mining, highways, etc. as may be self-certified by the owner

Auctioned, impounded and abandoned vehicles by any Enforcement Agency

Manufacturing rejects and test vehicles certified by the Vehicle OEM

6

Scrapping Procedure to be followed by RVSF before scrapping a vehicle (1/2)



Match the identity of registered owner as per the VAHAN database with the person handing over the vehicle



Verify the records of the vehicles produced for scrapping with the database of the stolen vehicles, held by NCRB as well with the local Police



Verify original documents from the owner / authorized representative:

- Original RC
- Authorization from the registered owner
- In case of inheritance, the death certificate of the registered owner accompanied with any proof of succession
- Certificate or order confirming the sale of the vehicle in a public auction in his favor duly signed by the person authorized to conduct the auction
- An undertaking from the owner/representative, indicating that vehicle has no pending dues, criminal record or litigation



Verify that the hire-purchase, lease or hypothecation agreement in the certificate of registration has been duly discharged

6

Scrapping Procedure to be followed by RVSF before scrapping a vehicle (1/2)



Collect self-certified copies of the following documents from the owner /authorized representative:

- Copy of PAN Card of owner
- Cancelled cheque of the bank account of owner
- Identity Proof of authorized representative
- Address Proof of the owner
- Digital photograph of the owner / authorized representative physical
- handing over the vehicle to the RVSF



Issue the 'Certificate of Deposit' as evidence of **transfer of ownership** and to allow the owner to avail **incentives and benefits for purchase** of a new vehicle



Submit **digital request for deregistration** of the submitted vehicle to the concerned road transport or regional transport office



Complete the treatment of the vehicle as per **CPCB guidelines** for Environmentally Sound Management of End-of-Life Vehicles and **AIS-129** and **issue a digital Certificate of Vehicle Scrapping (CVS)**



Maintain safe-custody of cut piece of Chassis Number for a period of 6 months from the date of issue of CVS and a physical copy of all documents for 2 years and scanned copies for 10 years for record and examination during inspection

7

Rules for Scrapping Yard of RVSFs (1/2)

Motor Vehicles (Registration and Functions of Vehicle Scrapping Facility) Rules

Area

Large area for **vehicular movement**, and storage of vehicles received, and recyclable material recovered

- **Earmarked area for parking of waste vehicles** on non-permeable asphalt or concrete or epoxy coated flooring with adequate drainage facility
- Adequate gated area to **handle, depollute and dismantle the vehicles**
- **Installation of CCTV cameras** in all areas. CCTV footage to be maintained for 3 months.



Equipment

Material handling machines to **minimize human intervention** and create safe workplaces

- **Certified de-polluting equipment for zero leakage** during draining of fuels, fluids, gases and liquids
- **Certified de-risking equipment** for safe removal of airbags, pre-tensioner etc.
- Appropriate **dismantling equipment**, for de-risking, de-polluting, shredding, etc.
- Appropriate **Industrial grade lighting** and ventilation systems
- Suitable equipment for **safe transportation of spares, scrap**



7

Rules for Scrapping Yard of RVSFs (2/2)

Waste Management

Designated areas for storing **segregated scrap**, and handling of **segregated spares**

- Designated space for **temporary storage of automotive hazardous waste** such as tyres, batteries, fuel, oils, liquids and gases
- Adequate capability for **responsible recycling of hazardous waste** or have tie-ups with **duly authorized recyclers** for the same

Compliance with Rules

Comply with relevant **health and safety legislation** and **environmental norms**

- Accredited with **quality standards** such as ISO 9001 (Quality management system), ISO14001 (Environmental Management System) and ISO 45001 (Occupational health and safety)
- Conformity to **noise pollution norms**
- Compliance with **CPCB guidelines** for Environmentally Sound Management of End-of-Life Vehicles and **AIS-129**



Audits and Certifications of RVSF

RVSF may be **audited by the competent authority** or any such agency on behalf of competent authority for:

- Regulatory and Compliance Audit
- Audit of the Mass Flow Statement as maintained in Form-3 by the RVSF



Audit Report shall also **evaluate the RVSF for performance and adherence** to occupational health and safety compliances, regulatory, business, environment and labour standards



Audit report shall be **uploaded on the portal by the RVSF annually** by the 31st May of that financial year



Observations of **non-compliance in the Audit Report** should be **resolved within two months** of issue of the Audit Report which may be extended by a maximum of one month by the Registration Authority



The RVSF shall ensure that **ISO certifications are revalidated** at least three months before their expiry



9 Appeal by RVSFs against order of Registration Authority

Eligibility for appeal

Any person aggrieved by an order of the Registration Authority may **appeal to the Appellate Authority within thirty days** of the date of receipt of such order



Procedure for appeal

The appeal shall be preferred in a **plain application format**, setting forth the grounds of objections to the order passed by the Registration Authority and shall be accompanied by a

- certified copy of the order appealed against
- fee of Rs 10,000/- (Rupees Ten Thousand only)

The Appellate Authority shall **dispose the appeal within thirty working days** from the date of appeal

