

Initiatives of the Shikokuchuo City Carbon Neutrality Council

30 May 2024

Shikokuchuo City Carbon Neutrality Council
(Secretariat: Development Bank of Japan (DBJ))

Overview of the Development Bank of Japan

(former) Japan Development Bank (JDB)→(now) Development Bank of Japan (DBJ)

Profile (as of March 2023)

President and CEO	Seiji JIGE	Capital	¥1,000,424 mil. JPY (all funded by government)
Established	1951 (formerly JDB)	Total assets	¥21,160.5 bil. JPY
Employees	1,270	Loans	¥15,176.2 bil. JPY
Overseas subsidiaries	London, Singapore, Beijing, New York	Capital adequacy ratio	15.15% (Basel III, BIS standard)
URL	https://www.dbj.jp/	Issuer credit ratings	A1 (Moody's), A(S&P), AA+ (R&I), AAA (JCR)

Defining characteristics of DBJ

Gov't-affiliated financial institution

100% of funds come from Ministry of Finance

DBJ values a long-term perspective, impartiality, public-mindedness and reliability.

Not restricted by the '5% Rule'

of banking law regarding investment ratio

Unlike banks subject to the Banking Act, DBJ can hold investments exceeding 5%

Contributes to competitiveness of Japanese companies and regional revitalization

through targeted investment activities

DBJ promotes investment operations to strengthen our risk money supply role

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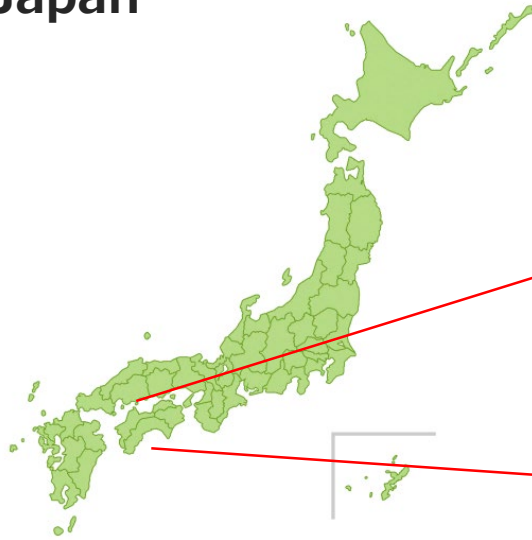
Section 1 Characteristics of Shikokuchuo City

1. Characteristics of Shikokuchuo City

Shikokuchuo City – in the “center” of Shikoku Island

- Shikoku is an island with a population of 3.69 million. The Shikoku Mountains run east-west through its central region creating different climates, with low precipitation in the north and high precipitation in the south. Shikoku is the only of Japan’s four main islands without Shinkansen high-speed rail service. As such, private cars are the main means of transportation. Exchanges with other regions utilize the Shikoku bridges (for cars and trains), air routes, and sea routes.
- Shikokuchuo City is located equidistant from the prefectural capitals of Shikoku in the center (“chuo”) of the island. It has become a crucial intersection for transportation where highways intersect.

Japan



Shikoku



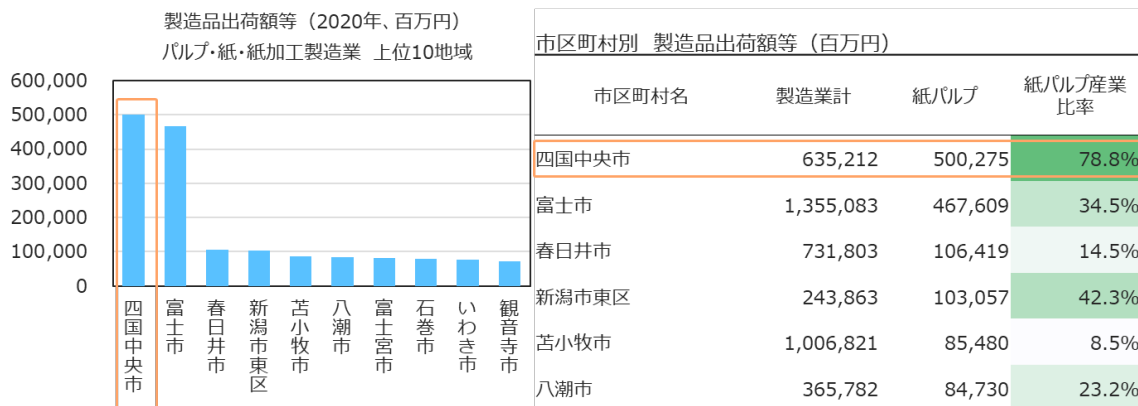
Source: Prepared by the Shikokuchuo City CN Council based on free materials (Frameillust, Digipot.net)

2. Characteristics of Shikokuchuo City

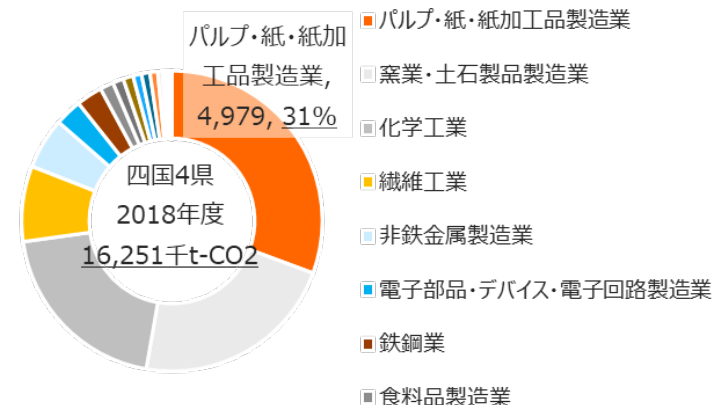
The key industry is paper manufacturing, with the paper and pulp industry accounting for much of the CO2 emissions in Shikokuchuo City

- Statistics on **shipment value of pulp, paper, and paper products** by municipality show **Shikokuchuo to have been Japan's top producer for 18 consecutive years**. Historically, the city has been a thriving hub for paper manufacturing (around 70% of the workforce is engaged in this industry).
- For Shikoku overall, as well as Ehime Prefecture and Shikokuchuo City, greenhouse gas emissions by industry are predominantly from paper manufacturing. The industry's potential contribution to achieving CN goals in the Shikoku region is significant.

Shipments in pulp, paper, and paper products industry



CO2 emissions by industry in the manufacturing industry in Shikoku (all four prefectures)



Employees in Shikokuchuo City

	全国		四国		愛媛県		四国中央市		富士市		春日井市	
	人数	割合	人数	割合	人数	割合	人数	割合	人数	割合	人数	割合
製造業計	7,465,556	100.00%	213,462	100.00%	77,030	100.00%	12,849	100.00%	35,036	100.00%	23,516	100.00%
食品製造業	1,094,454	14.66%	38,993	18.27%	13,302	17.27%	679	5.28%	3,463	9.88%	2,140	9.10%
飲料・たばこ・飼料製造業	102,880	1.38%	2,029	0.95%	735	0.95%	49	0.38%	555	1.58%	99	0.42%
繊維工業	219,843	2.94%	13,471	6.31%	7,865	10.21%	465	3.62%	209	0.60%	216	0.92%
木材・木製品製造業 (家具を除く)	86,067	1.15%	5,160	2.42%	1,487	1.93%	43	0.33%	503	1.44%	332	1.41%
家具・装備品製造業	86,078	1.15%	2,564	1.20%	489	0.63%	-	-	10	0.03%	293	1.25%
パルプ・紙・紙加工製品製造業	179,189	2.40%	18,526	8.68%	10,462	13.58%	8,945	69.62%	9,379	26.77%	1,949	8.29%
印刷・関連運業	235,105	3.15%	6,316	2.96%	1,435	1.86%	276	2.15%	232	0.66%	890	3.78%

Emissions (same as above)	Ehime Prefecture	Shikokuchuo City
Total emissions	9.03 mil. t-CO2	4.376 mil. t-CO2
Pulp, paper & paper products manufacturing (industry only/total emissions)	4,354 mil. t-CO2 (48%)	4,311 mil. t-CO2 (99%)

Source: (left) Prepared by Shikokuchuo City CN Council based on the "2021 Economic Census for Business Activity", Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry

(right) Prepared by Shikokuchuo City CN Council based on "Emissions chart of local governments", Ministry of the Environment

Section 2 Initiatives of the Shikokuchuo City Carbon Neutrality (CN) Council

1. The Shikokuchuo City Carbon Neutrality (CN) Council

Recognizing that problems cannot be resolved by a single company, a council was established for community-wide decarbonization

Overview

- Shikokuchuo City, Ehime Prefecture, a hub for the paper manufacturing industry, is a large consumer of coal and a heavy emitter of CO2. As decarbonization has been becoming a management challenge for paper companies, study sessions were held between Marusumi Paper and Daio Paper to determine the feasibility of collaborative efforts toward decarbonization, as aiming for an energy transition at the community-wide level, rather than at the individual company level, could lead to much greater benefits for cost reduction.
- Against this backdrop, discussions were held on establishing a council for the **comprehensive decarbonization of the Shikokuchuo area**, taking into account the national government's goal of achieving carbon neutrality by 2050. The council was **established on 21 June 2021** (with Ehime Paper joining in July of the same year).
- The Council deliberated on concrete measures and a roadmap for achieving carbon neutrality in the Shikokuchuo area based on meetings with external experts and internal discussions. **A roadmap and report were released on 30 March 2023.**



Type	Council members
Organizing members	Ehime Paper Co. Daio Paper Corporation Marusumi Paper Co.
General members	Energy consumers with business facilities in Shikokuchuo City (29 companies as of end of April 2024)
Observers	Government: Ehime Prefecture, Shikokuchuo City Local financial institutions: The Iyo Bank, Ehime Bank, Kawano Shinkin Bank Educational institutions: Prof. Uchimura, Prof. Nakahara (Ehime University) Industrial associations: Shikokuchuo Chamber of Commerce, Ehime Prefectural Pulp & Paper Industrial Association
Secretariat	Development Bank of Japan (DBJ) Group

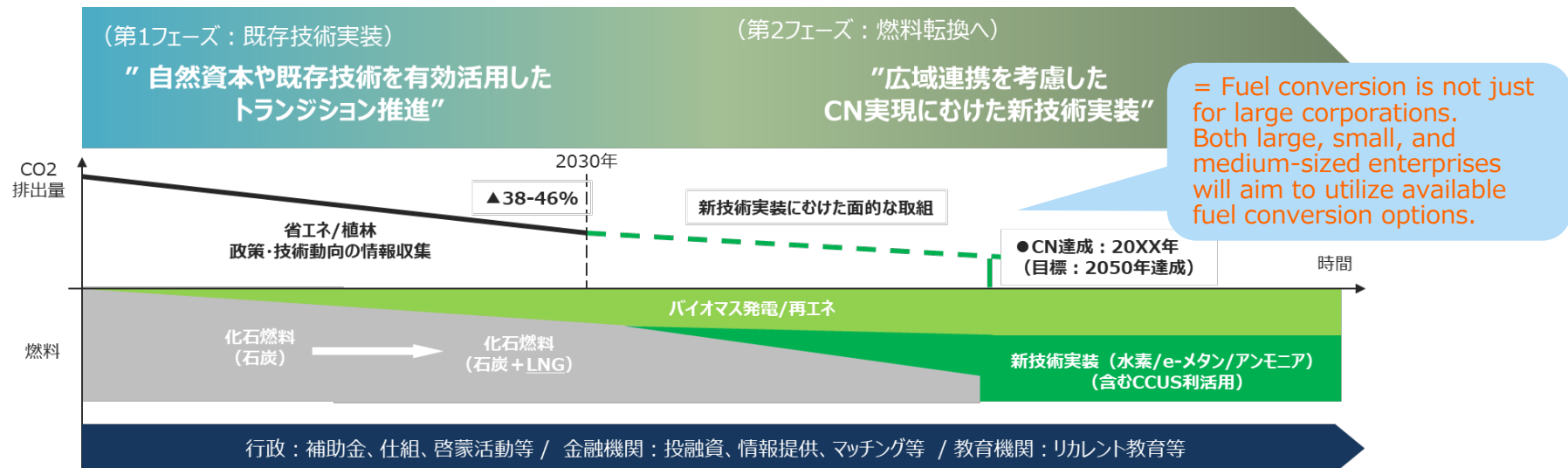
2. The Shikokuchuo Council's Goals on Decarbonization

Decarbonization of Shikokuchuo City must be considered in two stages: “implementation of existing technologies” and “fuel conversion”

- Toward 2030, existing subsidies will be utilized to implement initiatives that leverage existing technologies and the region's natural capital (e.g. power generation, afforestation), and policy and technology trends will be continuously monitored in collaboration with public and private sectors and surrounding regions (Phase 1). Looking ahead to 2050, the above will be steadily advanced to achieve a transition, alongside establishing supply chains and implementing new technologies (e.g. hydrogen, e-methane, ammonia) in collaboration with stakeholders both within and outside the region. To achieve both objectives, usage methods will be examined involving diverse stakeholders (e.g. residents, industries outside the paper industry), and testing and implementation of new technologies will be carried out (Phase 2).
- In preparation for demonstration and implementation, the characteristics of the industrial hub area will be leveraged and various stakeholders will collaborate to share human, material, and financial resources, as well as risks. Comprehensive community-wide initiatives such as utilization of forest resources, joint procurement of fuel, and joint use of power generation and storage facilities, will be advanced.

In aiming for comprehensive community-wide decarbonization, stakeholders will collaborate organically based on a common recognition of major goals such as fuel conversion (sharing of responsibilities).

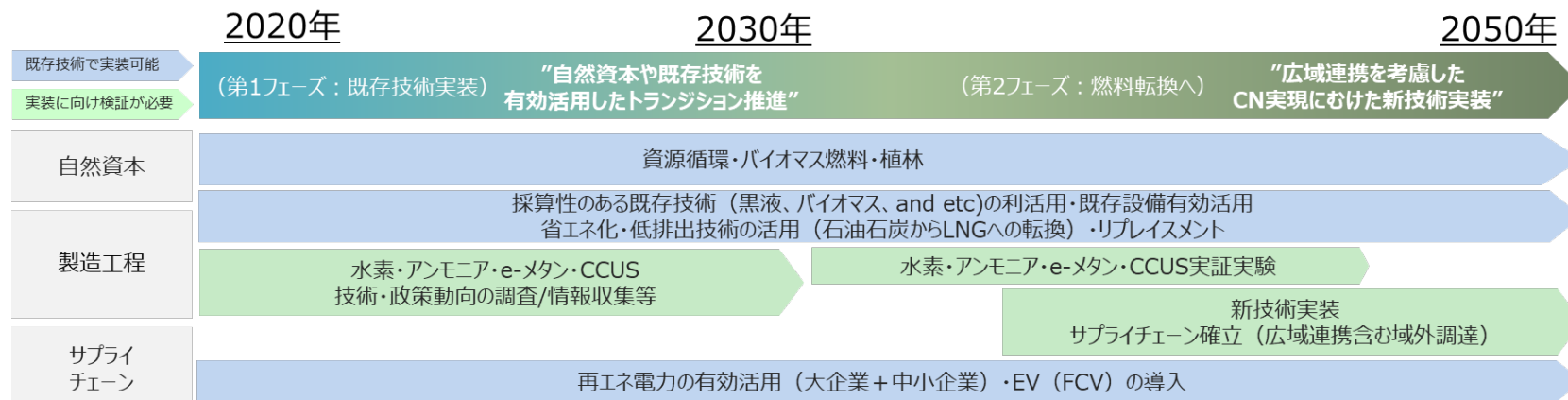
As individual companies, whether large or small, are limited in implementing initiatives on their own, discussions among local stakeholders will be further stimulated.



3. Shikokuchuo City CN Roadmap and Goals

Each stakeholder will fulfill their roles to realize a fuel conversion over the mid- to long-term

- <Phase 1> Industry, academia, government, and the financial sector will collaborate to **deploy existing technologies**. <Phase 2> While assessing technology and policy trends, **demonstration experiments and deployment of new technologies (fuel conversion)** will be carried out. **Collaboration among stakeholders, sharing of human resources, materials, funds, and risks, and community-wide initiatives** are crucial.



Main roles of stakeholder groups	Phase 1	Transitional period	Phase 2
Topic	Biomass, Renewable energy	Examine fuel conversion options/schemes	Execution of fuel conversion
CN Council/business (industry)	<ul style="list-style-type: none"> Utilization of biomass, black liquor, renewable energy Energy efficiency improvements for existing equipment/facilities 	<ul style="list-style-type: none"> Demonstration experiments (testing of combustion, etc) Consideration of joint procurement/joint assets 	<ul style="list-style-type: none"> Execution of joint procurement/joint assets scheme (following deliberations)
Educational institutions (academia)	<ul style="list-style-type: none"> Recurrent education Public awareness campaign 	<ul style="list-style-type: none"> Education on new technologies Human resource development 	<ul style="list-style-type: none"> Fostering leadership for CN
Government (public sector)	<ul style="list-style-type: none"> Support policies for renewable energy adoption (e.g. subsidies) Public awareness campaign 	<ul style="list-style-type: none"> Subsidy scheme for demonstration experiments Public awareness campaign 	<ul style="list-style-type: none"> Subsidies/investment in joint procurement scheme
Financial institutions (financial sector)	<ul style="list-style-type: none"> Funding for existing technologies Public awareness campaign/support for visualization of emissions 	<ul style="list-style-type: none"> Funding for existing technologies Risk money for testing, etc 	<ul style="list-style-type: none"> Funding for existing technologies Risk money for joint utilization framework

4. An important concept for CN (Just Transition)

Creating business opportunities through carbon neutrality initiatives and ensuring a just transition

- There are **two sides** to decarbonization initiatives: "**opportunity acquisition**" and "**risk reduction**". Carbon neutrality (CN) must be recognized as a **management issue**.
- On the other hand, CN cannot be achieved overnight, making it necessary to **proceed with "what can be done now" while maintaining a long-term vision**.
- Simultaneously, a **just transition** that leaves no one behind, particularly workers, is required. As we transition to a decarbonized society, inclusive initiatives involving local communities and residents are necessary. Additionally, "relearning" is key to the transition.

Opportunity

- Introduction of energy-saving/eco-friendly products to the market
- Enhancing trust from customers advocating decarbonization

Become a "chosen" company amid stricter supply chain management

Risk

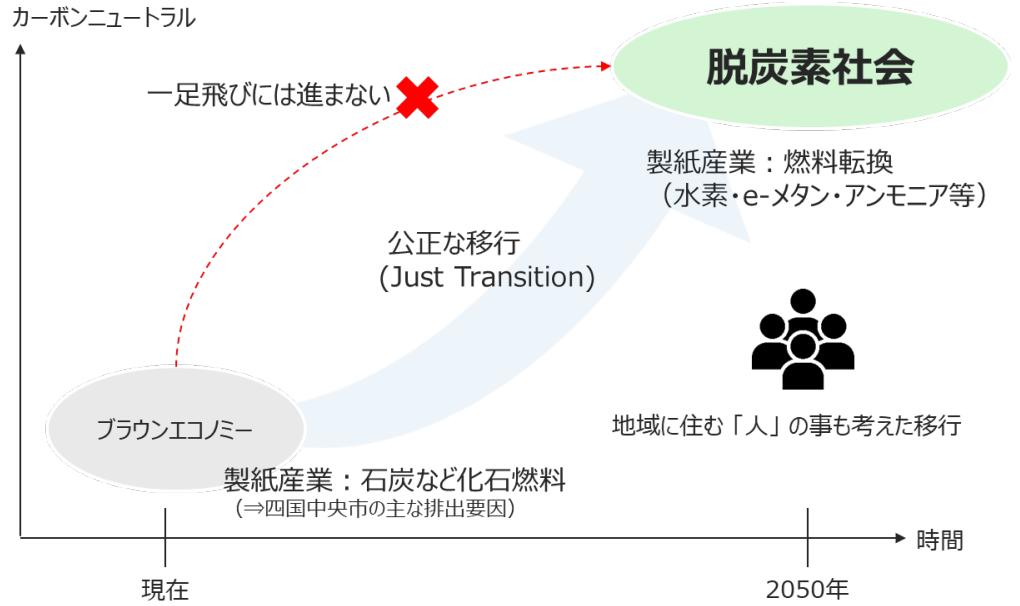
- Cost increases due to carbon pricing
- Changes in customer preferences (low-carbon/carbon neutral products)

Risk of higher costs and not being "chosen" amid stricter supply chain management

What is a Just Transition?

"A just transition seeks to ensure that the substantial benefits of a green economy transition are shared widely, while also supporting those who stand to lose economically – be they countries, regions, industries, communities, workers or consumers." (European Bank for Reconstruction and Development definition)

- ✓ **Just Transition Example**
As part of the decision to gradually phase out oil and gas production in the North Sea by 2050, the Danish government plans assistance packages to ensure **local employment for oil and gas workers with existing skillsets** through CCUS and electrification projects.
- ✓ **"Relearning" for a Just Transition**
Due to the changing business environment, **relearning to enhance the skills required for work** is necessary. Recurrent education, which alternates between employment and education, and reskilling without leaving one's job are gaining attention.



5. Keys to Realizing the Carbon Neutral Roadmap

Six (6) Major Keys to Realizing the Carbon Neutral Roadmap

- The key factors to achieving carbon neutrality are: ① technological advancements, ② utilization of existing “technologies”, ③ utilization and replacement of existing “facilities”, ④ transition and awareness raising activities for large and small-medium enterprises, ⑤ recurrent education and human resource development for employees, and ⑥ public-private and regional collaboration.

①技術進展

- 燃料転換に向けた技術進展
- サプライチェーンの構築
- 需要家からの能動的なアプローチ

④大企業・中小企業のトランジション・啓蒙活動

- 全業種全企業によるトランジション
- 事例の共有、啓蒙活動などによる裾野拡大
- 行政と連携した住民へのアプローチ

②既存“技術”の利活用

- バイオマス・廃棄物・黒液の利用・再エネ・省エネ・植林等の既存技術の活用
- 各ステークホルダーによる“今できる”ことへの取組（石炭石油からLNGへの転換、見える化等）

⑤従業員のリカレント教育・人材育成

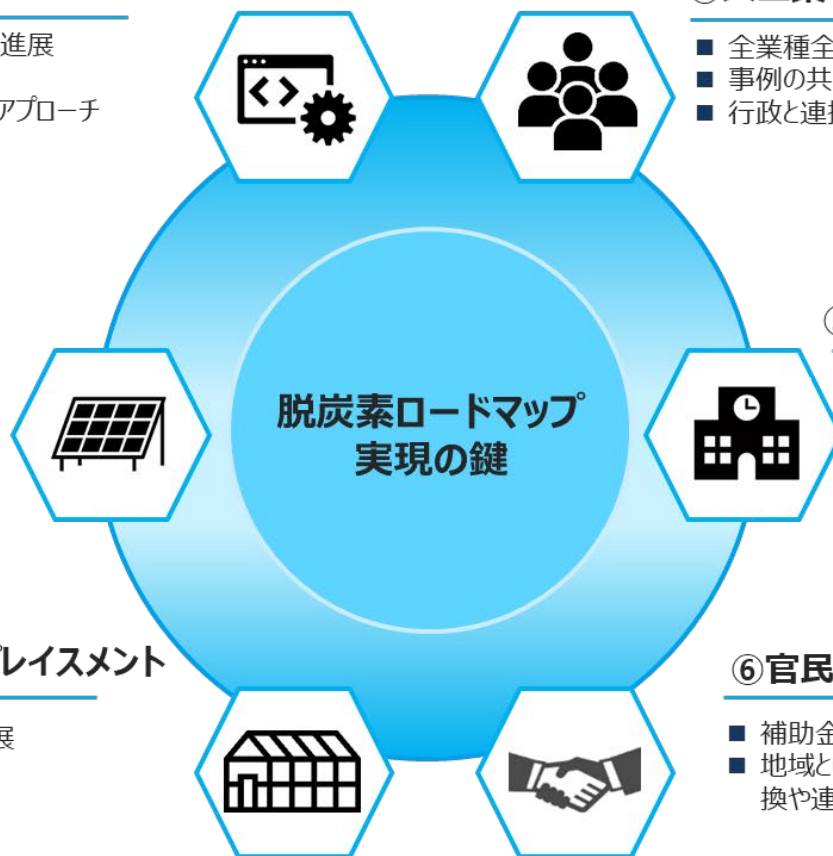
- Just Transition(公正な移行)に向けた職員教育
- 次世代・若手リーダーの育成に向けた教育機関との連携

③既存“設備”の利活用・リプレイスメント

- 既存アセットの有効活用、技術進展を踏まえた利用
- 最適なリプレイスメント

⑥官民連携・地域連携

- 補助金、税制、法改正等の行政支援
- 地域としての省庁や他地域との意見交換や連携

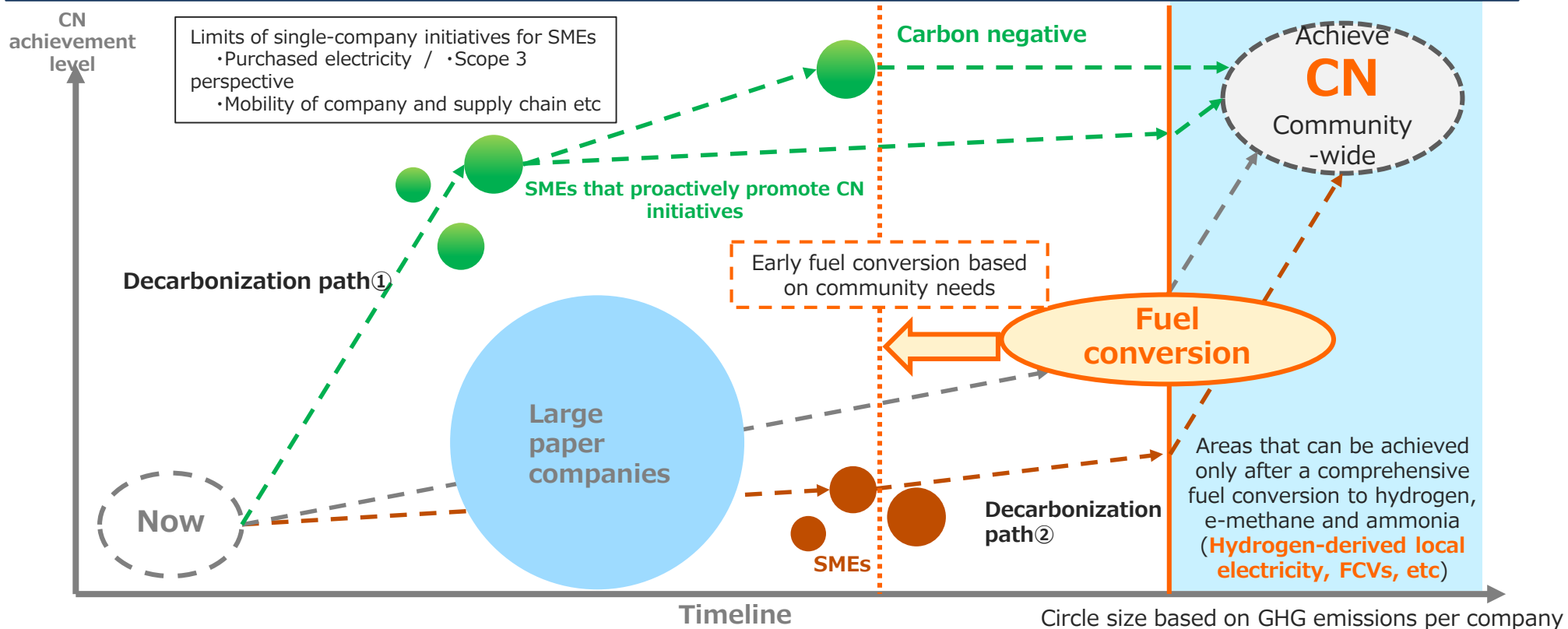


6. Fuel Conversion for Diverse Needs

Calculate back from goals on Roadmap => Realize carbon neutral management for both large corporations and small and medium-sized enterprises

- Fuel conversion for needs of large corporations only <<< **Fuel conversion involving more local stakeholders including small and medium-sized enterprises (SMEs)**
- Gaining consensus in the community requires a fuel conversion that can meet diverse needs. **We aim for the early realization of a fuel conversion based on examining fuel utilization methods for SMEs in the community** in addition to utilization methods for fuel in the manufacturing facilities of major paper companies (implementing community-wide actions that individual medium-sized and small businesses cannot undertake alone).

Timeline for achieving community-wide CN and pathways for companies

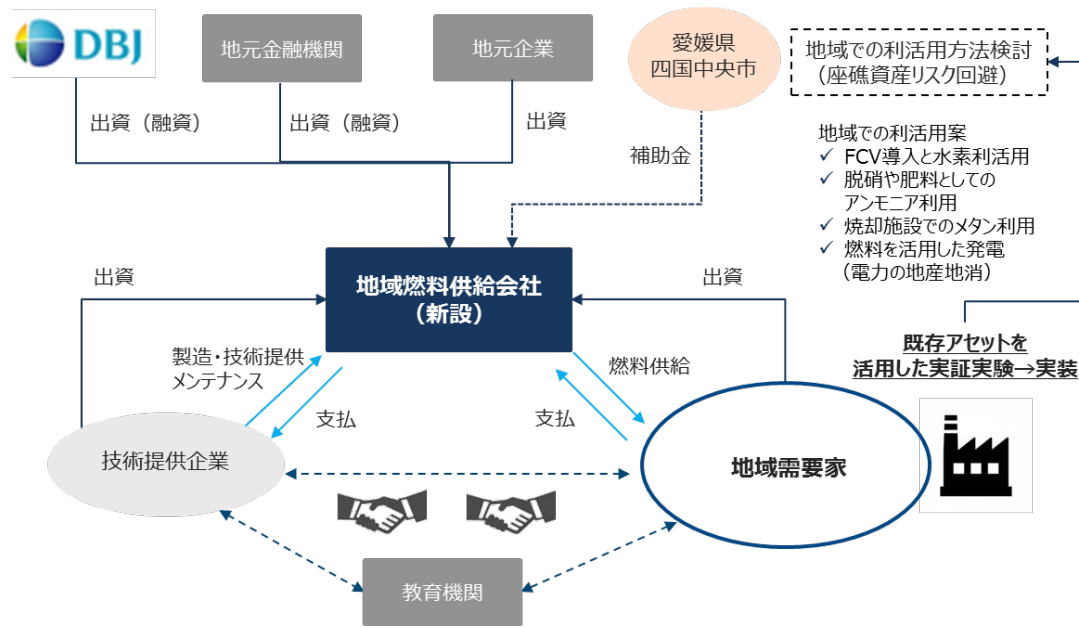


7. Establishment of Community Fuel Supply Company

Examining a scheme for sharing costs and risk combined with utilization of existing “facilities”

- Large investments over the medium and long term are required for fuel conversion to hydrogen, e-methane, or ammonia. But executing large infrastructure investments and procurement contracts for new fuels are difficult when the situation regards fuel conversion is highly uncertain. Therefore, initially, **existing facilities will likely be utilized while conducting mixed combustion demonstration experiments.**
- During demonstration and transition stages, utilizing existing infrastructure while **sharing costs and risks** among various players is essential.
- The CN Council envisages **the establishment of a company that manufactures and supplies fuel in the community** to share risks. Local consumers will utilize the hydrogen, e-methane, ammonia etc. manufactured or purchased by the company in their existing assets (demonstration experiments, installations).

Proposal for establishment of fuel manufacturing/supply company in the community Timeline
 (Investment in demonstration experiments utilizing existing facilities/transition
 (sharing investment risk))



	From Establishment to implementation of Community Fuel Supply Company
Establishment	<ul style="list-style-type: none"> ✓ Ongoing monitoring of policy and technology trends based on public-private and interregional cooperation ✓ Ongoing discussions with technology providing companies and government to realize scheme ✓ Discussions with local consumers on approaches to fuel conversion in community ✓ After fuel conversion goals firm up, CN Council will play a leading role in obtaining consensus of the community on fuel conversion, joint procurement and joint assets, and stakeholders will invest to establish company ✓ Aside from fuel for use at factories, other community uses will be examined to explore strategies for avoiding the risk of stranded assets
Demonstration experiments	<ul style="list-style-type: none"> ✓ Partner with local companies, technology providing companies, and educational institutions to conduct demonstrations using existing assets (including improvements to existing assets) ✓ Discussions in the community on issues related to medium to long-term implementation to deliberate on goals based on demonstration experiments
Installation	<ul style="list-style-type: none"> ✓ Implementation in the community based on demonstration experiments ✓ Continually consider other utilization methods in the area in case implementation is not feasible (reduce losses and resource investment losses for individual companies by distributing initial cost risk)

8. Utilizing community resources to manufacture synthetic fuels (SAF, etc)

Considering production of synthetic fuels (such as SAF) that leverage the characteristics of Shikokuchuo City

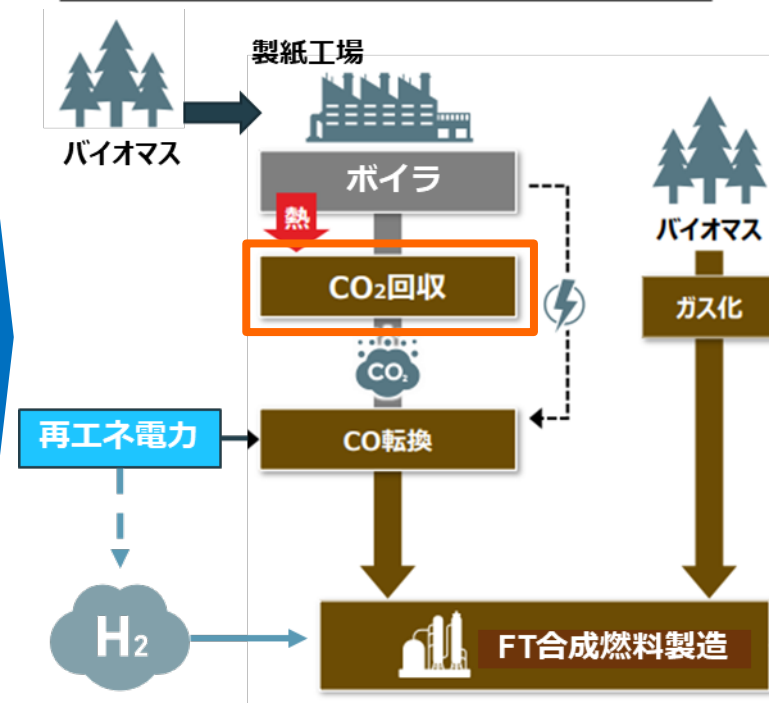
- Fossil fuel consumption in the global transportation sector is enormous (approximately 2.891 billion tons oil equivalent), and the demand for biofuels is growing. Among these, sustainable aviation fuel (SAF) is gaining attention due to the difficulty of electrifying aircraft. In fact, mandatory use of SAF is expected to start in 2027, accelerating efforts to supply it.
- The CN Council has held ongoing discussions with stakeholders on production of synthetic fuels (such as SAF) derived from CO2 emissions from the paper manufacturing process.

4. 四国中央市の特徴を活かした産業振興の提案

世の中の考えはWell-to-Wheel/Wake/Wing：生産井から走行/航行/飛行迄。
 基幹事業者の連携の在り方で、土地の狭さは弱みから強みへ



■バイオマスを基軸としたSAF製造フロー

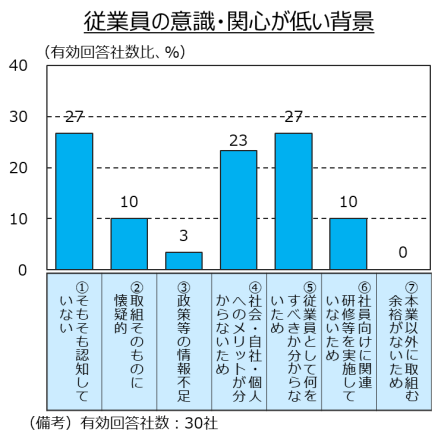
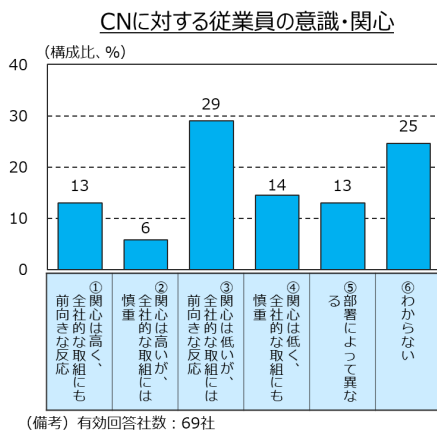
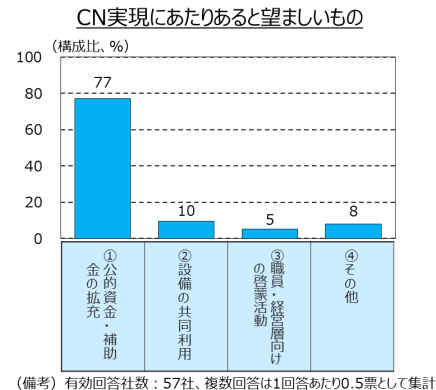
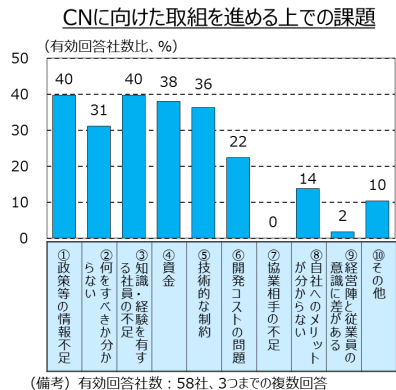
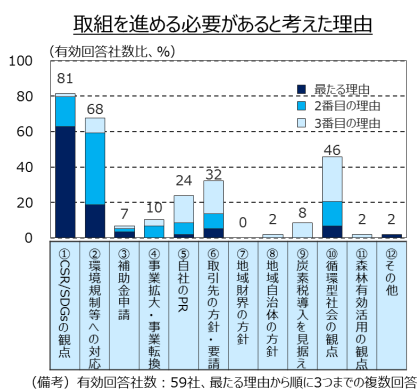


Section 3 Community-wide initiatives

1. Awareness Survey of Companies with Locations in Shikokuchuo City

To achieve CN, we need not only “money” and “material”, but also efforts to raise awareness among “people”

- An awareness survey was conducted among 70 companies with locations in Shikokuchuo City. While many companies recognized the importance of addressing CN, challenges remained. In addition to technological and financial issues, companies identified soft issues such as **insufficient information and insufficient knowledge and experience among employees**.
- To resolve these issues, respondents indicated the need for support through public funding and subsidies, employee education and awareness-raising activities, and sharing of best practices, suggesting that achieving CN will require **efforts to enhance the awareness and mindset of people, in addition to financial and material resources**.



2. Model Project for Building a Community-Wide Support System for Decarbonized Management

Selected for a model project on supporting decarbonized management for SMEs, with the Shikokuchuo City CN Council as a "platform"

Objective of the project (excerpt from the MOEJ website)

To promote and disseminate decarbonized management among SMEs in a community, building a community-wide support system centered on local public bodies, local financial institutions, chambers of commerce, and other business organizations that regularly interact with SMEs and are involved in their management support is effective. This project **aims to create leading model cases** through the two initiatives below:

- ① **Creation of community-wide support systems for decarbonized management of SMEs**
- ② **Expansion of support programs for SMEs within the community-wide support system**

Overview of support (excerpt from the MOEJ website)

In this project, the secretariat (PwC Consulting LLC) will provide the following support for initiatives 1 and 2 above.

Overview

① Support System Creation

Support the creation of community wide support systems that aim to simultaneously promote decarbonized management among SMEs and provide solutions to community issues based on determining the ideal support system and involving stakeholders (e.g. feedback, support for determining issues, progress management support, facilitation support, service development support, and networking)

② Support Menu Expansion

In regions where a community-wide support system is already established, support will be provided for the creation of content to be used by the institutions providing support and examination/testing of matching with specialized institutions toward the expansion of support menus. The goal is for projects to have significant potential and model viability where community-wide support is meaningful.

By using the Shikokuchuo City CN Council, which includes stakeholders from industry, academia, government, and the financial sector, as a "platform" or "support system," we aim to expand the menu of support for decarbonized management of SMEs.

3. Overview of Model Project in Shikokuchuo City

Aiming to become Japan's Number One sustainable paper town with carbon neutrality as an "opportunity"

Approach and vision of the community in the model project (considering Shikokuchuo City's relevant policies and plans)

- To break free from being the most high-CO2-emitting paper town in Shikoku, we aim to: 1) Use carbon neutrality as an opportunity to prevent the decline of local industries, 2) Create a sustainable town by combining our identity as Japan's top paper town with decarbonization, 3) Make the town attractive to young people based on decarbonization, SDGs, and local promotion. We will become "Japan's Number One sustainable paper town" based on sustained circulation of people, goods, and money.

地域ぐるみでの脱炭素実現



サステナブルな日本一の紙の町

グランドデザイン 脱炭素×紙の町

- 四国中央市SDGs未来都市ターゲット -



- ヒト・モノ・カネの持続的な地域循環-

- ヒト** “脱炭素”や“SDGs”実現による若者に選ばれる町
持続的な人材の確保
- モノ** 脱炭素製品の生産および消費
脱炭素な日本一の紙の町
- カネ** 働きがい&脱炭素で稼げる産業
経済的自立と経済成長（個人・産業双方）

4. Concrete Support Menu provided in the Model Project

Free provision of surveys and CO2 visualization services, provision of workshops

FY 2023 Support Menu

Awareness raising

- Decarbonization seminar on paper industry
- Workshop by supply chain companies and supporting organizations**
- Informing SMEs about CN Council (PR)

Assessing state of affairs

- Survey on needs of Shikokuchuo SMEs**
- Support for promoting visualization of CO2 (free provision to SMEs)**

Goal setting

- Hearings to determine needs of paper product handling companies**

Reductions

- Impact analysis on PL considering the decarbonization trend/consideration of support measures (implementation based on 1 to 4)

Information disclosure

- Mutual information disclosure and exchange of human resources between large corporations/SMEs (implement over mid- to long-term)



5. Model Project Initiatives and Concrete Support for FY 2023

Create system for deliberation centering on CN Council with the shared vision of a “Japan’s Number One sustainable paper town”

In FY 2023, with the Shikokuchuo City CN Council as the core, stakeholders in the local paper-related industry will view decarbonization not as a cost but an opportunity. They will experience approaches that facilitate voluntary actions, form a unified community brand, and clarify project contents for the next FY and beyond.



6. Model Project Actions and Outcomes

Initiatives to support decarbonized management of SMEs based on collaboration of industry, academia, government, and the financial sector

Conducted decarbonization workshops targeting 10 SMEs in the city and support organizations to break down the process into "know, measure, reduce" steps, promote ownership, and raise awareness on decarbonization. Shared supply chain initiatives and provided free CO2 visualization tools to understand current situation.

Hearings on decarbonized product needs of companies handling paper products

- Conducted hearings with companies in the city and their business partners in the supply chain (10 companies) in collaboration with the Iyogin Regional Economy Research Center (IRC). Identified demands of paper handling companies in Shikokuchuo City, such as food and pharmaceutical wholesalers, toward their suppliers. Although clear Scope 3 targets have not been set, **environmental awareness among business partners and end consumers is on the rise, suggesting that environmentally friendly paper products could gain a competitive advantage**. The needs of related companies have already been communicated during workshops, with a shared understanding among participants of the growing demand for decarbonization.

Questionnaire on needs of community SMEs

- The Shikokuchuo City CN Council led the way in distributing a questionnaire to 474 companies in the Shikokuchuo Paper Industry Promotion Council, to survey the awareness and needs for decarbonization (response rate slightly above 10%). **Companies prioritize enhanced profits and talent acquisition, with few (4.2%) prioritizing decarbonization efforts at present**. The main motivations for engaging in decarbonization were cost reduction (46.4%) and contribution to revenue growth (44.3%).
- Based on results, the CN Council aims to involve SMEs in its overall community strategy. The Council agreed to work to enhance the motivation of SMEs to engage by **creating mechanisms to connect decarbonization to cost reductions and revenue increases**.

Familiar best practices to experience decarbonization

- Provided freely 10 SMEs in the city who applied through the Pulp & Paper Industry Association with visualization tools (e-dash, Asuene, Zeroboard). **Proposed reduction measures based on the results of each company's emissions visualization (assessment of current situation → proposal)**. Financial institutions partnered with these companies, learning to implement and operate the visualization tools, and agreeing to use them for future proposals to their clients.

Decarbonization workshops

- Conducted the 1st, 2nd, and 3rd decarbonization workshops on "Know", "Measure", and "Reduce" respectively for 12 SMEs and support organizations in the city. Identified necessary actions for both companies and support organizations to advance decarbonization. Participating companies gained understanding of the benefits of decarbonized management and were **encouraged to take ownership by presentation of specific cases of how decarbonization has contributed to improved profitability**. Through discussions, participants explored topics such as "eco-friendly paper products", "utilizing emissions calculation data", and "measures and support for achieving decarbonization".
- Participating companies reported "gaining familiarity" with decarbonization, while support organizations noted that they "reaffirmed the need to strengthen internal knowledge of decarbonization and link it to proposals for companies." The effectiveness of fostering ownership and making concrete action plans was confirmed for both companies and support organizations.
- **Agreed on continuing to hold CN Council-led workshops (also agreed to launch (undermentioned) human resource development program).**

7. Human Resources Development Program for Decarbonization

Launched a Human Resources Development Program for Decarbonization based on cross-sector collaboration led by the Ehime Prefectural Pulp & Paper Industrial Association

Plan to implement a training program for both management and employees based on the "know", "measure", and "reduce" steps. It will aim to solve management issues like improving profitability being mindful of not only vertical connections within a company (stimulating discussions on CN between supervisors and subordinates) but also lateral connections between companies.

		No.	Agenda	Contents	Instructor
3 hrs. & 35 min. each day	KNOW	1	Opening remarks, decarbonization trends	Understanding decarbonization trends in society (global warming, international debate, regulations)	CN Council Secretariat (DBJ)
		2	Shikokuchuo City initiatives	Decarbonization initiatives in Shikokuchuo City	Shikokuchuo City
		3	Methods/benefits of decarbonized management	Management issues and links to decarbonization, understanding risks and opportunities	Local CN-promoting companies
		4	Paper product value creation through decarbonization	Understanding value addition based on decarbonization (reducing plastic, CNF)	Ehime University
	MEASURE	5	Necessity/methods for calculating emissions	Understanding necessity/benefits of emissions calculation for decarbonized management	Companies supporting visualization
	REDUCE	6	Emissions reduction methods	Understanding approaches to decarbonized management (energy saving, renewable energy, fuel conversion)	Major energy company
		7	Emissions reduction case studies	Developing a concrete image of company initiatives referring to example management decisions (e.g. investment)	Major machine manufacturer
	RESOLVE	8	【Working discussion】 Examining reduction measures	Examination of reduction measures to take back to company for discussion	Local consulting company
		9	Closing remarks	Reflection	CN Council Secretariat (DBJ)



Vertical connections
×
Lateral connections

Decarbonization
×
Solving company problems

8. Sustaining Initiatives for Years to Come

Conduct human resources development program for decarbonization and raise awareness among SMEs

Pulp & Paper Industrial Association will conduct human resources development program (below), and supporting organizations will strengthen support menu so participating companies can engage in decarbonization.

Aims for next fiscal year (FY)		Functions/menu must be improved next FY and measures		
Support system	<ul style="list-style-type: none"> Pulp & Paper Industrial Association will take the lead in providing a human resources development program designed to increase awareness and knowledge on decarbonization among employees of SMEs Financial institutions will provide visualization services (collaborating with tool vendors) for visualization and creation of reduction plans among SMEs, and strengthen decarbonization support by employees through acquisition of decarbonization advisor certification. Government will continue and strengthen subsidies to lessen the cost burden on SMEs 	Function	Conducted by	Measures to strengthen
	SMEs	<ul style="list-style-type: none"> Members of Pulp & Paper Industrial Association and Chamber of Commerce will participate in human resources development program to understand decarbonization options needed and engagement methods for decarbonized management Customers of financial institutions will accept proposals from branch staff, utilize visualization tools and SLL support to heighten motivation for engagement. 	Leader	Pulp & Paper Association
				Major corporations
		Contact	Financial institutions	<ul style="list-style-type: none"> Promote certification courses among branch employees to improve knowledge on decarbonization
		Type	Conducted by	Measures to strengthen
		Know	Pulp & Paper Association	<ul style="list-style-type: none"> Implement human resources development program (awareness-raising on decarbonization)
		Measure	CN Council	<ul style="list-style-type: none"> Implement decarbonization workshops
		Reduce	Shikokuchuo City	<ul style="list-style-type: none"> Provide emissions calculation support tools/SLL to branch staff, support for drafting reduction plans
		Information disclosure	CN Council	<ul style="list-style-type: none"> Budgeting for subsidies for energy-saving equipment and adoption of EVs
				<ul style="list-style-type: none"> Support for information disclosure on decarbonization initiatives

【Promotion system】

Shikokuchuo City CN Council (Meets Twice Annually)

Involve SMEs and serve as an ongoing platform for debate and agreements on goals for community-wide decarbonization

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