Norges Bank Investment Management





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Real Estate ESG Strategies

of the Global ESG Leaders Interviewer: Yukihiko Ito [EaSyGo]

Responsible investments have always been a cournerstone of NBIMs investment strategy as we believe ESG drivers will impact financial performance long term. In the last couple of years we have reshaped our responsible investment strategy to prepare our buildings for Net Zero and as such we have set a 2050 Net Zero target and a target to reduce scope 1 and 2 emissions with 40% by 2030 based on a 2019 baseline. Furthermore we aim to be transparent about our progress towards our targets and will be publishing the share of our portfolio that is aligned with a 1.5C decarbonization pathway annually.

We have adopted a data driven approach, so for instance for new investments we will request historical energy data so that we can analyse that data and understand alignment with science based decarbonization pathways. If an investment does not align, we estimate the capital needed to decarbonize and incoporate that into the pricing of the asset. We also look at physical risk and use forward looking climate models in order to understand risks and potential impact on value.

In term of asset returns we see the maturity of the various markets differently, but we are starting to see clear trends that tenants are willing to pay higher rents for energy efficient buildings and we belive this trend will continue. In addition, we see greater institutional investors demand for green assets, which is an important consideration if and when we are planning to sell your assets.

In terms of liquidity, we also see ESG factors playing in. More lenders are starting to underwright green bonds and we should therefore start seeing more favorable terms for green assets vs. non green assets. It can at times be hard to quantify ESG factors direct impact on liquidity, but we often see it play out in transaction velocity.

We currently use GRESB to measure the "s" and "g",



"Otemachi Park Building" - acquired in Japan under a partnership with Mitsubishi Estate.

and know these factors will be increasingly important going forward.We have not set a spesific target for Social Impact across our portfolio, as we have for the "e", but this is one of the things we are working on. Interestily many of these factors are intertwined – so by improving the E often we also help the S and visa versa.

In addition, our real estate partners in Japan have adapted various initiatives at a corporate level for the "s" and the "g" and we engage with them and support their efforts.

What measures do you take to improve stakeholder engagement (esp. tenants in your assets)? For example, do you have any special programs or ESG/sustainability campaigns to engage your tenants, employees and other stakeholders/local communities for ESG efforts?

One of the ways our partners engage with tenants is through green lease clause. Through green lease discussions, awareness towards reducing emmission, energy usage and waste are fostered. They provide periodical training related to environmental and sustainability awareness to their employees. Also, they try to engage with external parties such as suppliers and construction comapnies to establishe a responsible supply chain system based on ESG policies implimented.

A spesific exapmle of an initiative is MEC Circular City Marunouchi Project. Recycling PET bottoles used in Marunouchi (600 ton per year) and reduced Co2 emission by 60%.

What's the biggest challenge you are facing now to approach ESG in real estate asset management?

We see a couple of different challenges that we are working through,

First of all, access to good data can be challenging in some markets depending on the lease structure. Furthermore the data requirements have moved away from just historical energy date to more real time. With real time data it is possible to analyse where and when the building use energy and as such optimize how the building operates, there is also a potential to better time when the building buys energy from the grid and when it stores it within the building.

Secondly, incentives has to be better aligned. In some markets landlords are expected to make the capital improvements to the building while the tenants are the beneficiaries or the other way around and those incentives needs to be aligned and worked towards in partnership.

Finally we need better standards, something as simple as what a net zero building actually means is not clearly defined and we also need a better framework for how to think of embodied carbon to ensure more wholistic view on sustainability.



"The Iceberg" - acquired in Japan under a partnership with Tokyu Land Corporation

Please share some case studies of ESG best practices from your investments.

Most of our Tokyo assets are less than 15 years old and very efficient in operations, therefore we have not done any major retofits in our Tokyo portfolio. But one example of how we work to reduce emissions is by increasing the share of renewable energy the assets use. Tokyu Land Corporation, one of our JV partners in Japan, has been heavily investing in renewable engergy projects including solar and wind power. They have over 60 renewable energy projects generating almost 1200 MW and those projects generate enough electricity to serve the power used in the assets owned and managed by Tokyu Land Our other JV partner, MEC started to use carbon nutural natural gas in Marunouchi reducing Co2 emmission by 97,000 ton / year.

In terms of a case study, we can share an example from our US portfolio of an old r building that we are currently retrofitting:

345 Hudson is owned and operated by Hudson Square Properties, a joint venture with Hines, Trinity Church Wall Street, and Norges Bank Investment Management, that owns 12 buildings totalling 6 million square feet downtown New York.

345 Hudson is an ideal case study for low-carbon retrofits in the New York market. Occupying the entire block between King and Charlton Streets in New York' s former Printing District, the 1931-constructed building covers over 850,000 square feet across 17 stories. Typical of New York's commercial building stock, the building uses relatively inefficient fossil-fuel based systems. Notably, it is the most carbon intensive building in the HSP portfolio, with a 2019 EUI of 83 kBtu/sf, and with potential Local Law 97 exposure up to \$440,000 per year starting in 2030.

The retrofit of 345 Hudson Street takes advantage of tenant turnover from now to 2032 as an opportunity to upgrade the building's infrastructure to new, carbon-efficient, energy cost-saving technology and completely decarbonize the 850,000 square foot property. By 2032, once fully implemented, whole-building energy use would be expected to drop by more than 50%, from 83 to about 38 kBtu/sf— 80% lower than an average large New York City office building. Peak demand would fall by 80%, from 13.5 MW to 2.7 MW. Total building carbon emissions would fall 85%, compared to a pre-retrofit baseline, with reductions increasing towards 100% as

New York's electric grid becomes fully renewable.

The key principle of the retrofit strategy hinges on the reimagining of heat as a resource-part of the building infrastructure-rather than a linear input. For 345 Hudson, a water based thermal network runs throughout the building, between and within floors, enabling heat transfer between floors. The thermal network allows for heat transfer between floors, and to and from rooftop thermal storage. Heating and cooling energy, once provided in a linear fashion (e.g., gas boiler to steam radiators; air handling unit to packaged air terminals), will be recovered, stored, and recycled, via heat pumps, connected to a thermal spine-a hydronic water loop running the full height of the building. To provide fresh air to the tenants, a key feature is separating ventilation from heating and cooling systems. This model utilizes a Dedicated Outdoor Air System (DOAS) which provides 100% fresh air to tenant spaces, meeting indoor air quality standards widely adopted in response to the COVID-19 pandemic. Critically, the DOAS uses a heat recovery system with an efficiency of nearly 90%, capturing otherwise wasted energy to temper incoming fresh air.

The advantage of using a phased approach, is that the costs of the retrofit is spread across several years, incorporating key milestones like equipment end-oflife and tenant turnover to take advantage of previously planned capital expenditures. The phased retrofit plan provides long-term financial value, transforming 345 Hudson into a green asset—a class-A building with no legislative risk and allows HSP to meet Local Law 97's building emissions targets, saving an estimated \$440,000 each year starting in 2030. In the near-term, these low carbon systems deliver health and comfort benefits to the existing tenants and act as a key differentiator for prospective tenants in a commercial market still rebounding from the devastating impacts of COVID-19.

We understand that NBIM is a core member in CRREM, and recently NBIM outlined a 2025 climate action plan. Could you share some insights on how you utilize the CRREM tools for decarbonization to help achieve net-zero emissions for your assets?

Correct, we have supported Carbon Risk Real Estate Monitor (CRREM) as a co-founder and member of its steering committee since 2019. The initiative aims to contribute to the standardisation of climate transition risk analysis and reporting in real estate markets. As

Interviewer's Note

Upon concluding the interview, I am of the firm belief that acquiring knowledge about NBIM's ESG efforts is of utmost significance for Japanese institutional investors, fasset managers and real estate companies. It will allow the Japanese players to engage in a constructive dialogue with institutional investors at a global level and foster mutual understanding. As such, I am thrilled to have had the opportunity to share valuable information about NBIM's ESG strategy with our readers via this interview series. This conversation is an important milestone for me as well.

Yukihiko Ito [GOYOH / EaSyGo]

ember of CRREM Global Scientific & Investor Committee

we alluded to above, NBIM have adopted a data driven approach to better acccess materiality at an asset level, and we view CRREM as the most granular science based decarbonization pathways for the real estate sector to measure operational carbon. We use CRREM to analyse energy intencity and carbon emission at an asset level and compare against the decarbonization pathway to better understand the "stranding risk" of the asset. We also use it at a portfolio level to measure the % of our portfolio that is aligned with a 1.5C decarbonization pathway.

We do however recongize that CRREM has to date, mainly have been adopted in Europe and that global adaption rely on good data and accurate pathways for the markets they represent. We therefore continue to support CRREM in initiatives to make the pathways more granular and relevant for the markets they represents.