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[WATERMARK]
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[MONA WETRHUS MINDE]
Hi, and welcome to another podcast in our series meant to give you an introduction to different aspects of offshore wind.
My name is Mona Wetrhus Minde, and I work at the Faculty of Science and Technology at UIS.
And today we're going to talk to Arve Rettedal in Equinor about project management.
Welcome to us, Arve.
Do you want to tell us a bit about yourself and what you're working with?

[ARVE RETTEDAL]
Yes, thank you very much, and thank you for inviting us to tell a bit about what we're doing.
As you said, my name is Arve Rettedal, and I'm heading up a unit within renewables in Equinor called Project Deliveries.
And that's a quite broad unit with respect of responsibilities.
We have site conditions, which is really geotechnical, but also wind yield, which is the wind that we are really making money off.
We have project control and management.
That's project control, it is estimation, and it is information data management.
We also have engineering and quality risk management, where we have all the engineering managers and quality and risk managers.
And last but not least, we have construction and commissioning.
So we are covering the whole aspects from very early phase until the last part of the commissioning phase in the renewable projects.

[MONA WETRHUS MINDE]
Yeah, thank you.
And before we talk more about project management itself, I thought maybe we could just talk a little bit about how it can now seem that there is uncertainty if offshore wind is something to go for at all in Norway.
Do you have any thoughts around this?

[ARVE RETTEDAL]
Yes, of course, if you look at the public debate, there might be some uncertainty.
But regards on how we look at it from Equinor's point of view, we have the same strategy and Norway is one of our strategic areas that we will work in.
And at the same time, we look at renewables at the global perspective.
And globally, we have quite some activities ongoing these days.
But there are some uncertainties.
Okay, but we are following the same strategy that we have done for a couple of years now.

[MONA WETRHUS MINDE]

Yeah, so I guess if Equinor wants to go into this, it still has to be economically viable.

[ARVE RETTEDAL]
That's a clear expectation within our company, from our CEO, that we will not execute projects that we will not earn money on.
So we need to have economics in the project that makes money for us.
And we are working closely with the Norwegian government as well to look into the auctions that hopefully will come in Norway are in place.
But that's a bit outside of what we are deciding.
It is a Norwegian government perspective.

[MONA WETRHUS MINDE]
And maybe we can talk a little bit more about the projects you are doing right now.

[ARVE RETTEDAL]
Yes, I think that's useful to do.
And the honest answer from renewables in Equinor, that we have more than ever on our plate.
We have three major projects into execution, which is the Empire Wind Project just outside of New York.
We have the Baltic Two and Three Project in Poland.
And we have the Doggerbank Project outside of UK, which is the largest offshore wind project in the world.
which will have a capacity of 3.6 gigawatt when we are finished.
And we have started on what's called Doggerbank A to get production already.
And a fun fact is that the projects we are doing now is generating power for approximately six to seven million households.
So it's a massive execution task we have.
And this year alone, we will have 50 million work hours on our project, which is a large, large execution project.

[MONA WETRHUS MINDE]
So you already have quite a large portfolio within offshore wind?

[ARVE RETTEDAL]
We have what we could do now in execution, but we are also trying to get new projects in what's the next project that we are going to start up and have an investment decision in.
So there's a lot of people working in early phase to be able to have good enough projects for us to sanction them.
And then we have the execution portfolio where people are
really working on executing the project just now.

[MONA WETRHUS MINDE]
And do you have any, have you had, what have the main challenges or have you had any challenges with this?

[ARVE RETTEDAL]

Yes, if you're talking about project in execution, and I've been working with projects not all my life, but at least from university until now, and I've been working on onshore projects within civil engineering.
I've been working on offshore projects within oil and gas, and I'm part of the renewable portfolio in Equinor.
And I think projects itself, we have challenges, and that is why we are...
following on project even though if it's a new hospital here in Stavanger or if it's a renewable part there will always be challenges but what's the fun part of working within project development and project management that you don't really know what challenges you are facing starting the project but the planning of the project is really the important part to secure that we don't have a lot of challenges but of course we have challenges and if you look at the Doggerbank project
We are delayed, so we have had challenges there with regards to installation, but also weather challenges.
That's not anything we could do about, but we need to take that into the planning part of the projects.
If you look at the early phase, it is very important to have a project which you started to say that we make money on.
Getting those projects economical and get to earn money on them is the important part there.
And we have people working on that.
And we need to think a bit different than we have done before.
And we can't take everything from an oil and gas project into a renewable project.
We need to make it easier.

[MONA WETRHUS MINDE]
What can you use from your knowledge from oil and gas into renewable projects?

[ARVE RETTEDAL]
A lot.
Most of the people working within renewables, including myself in Equinor, has a background from the oil and gas project.
And there was a lot of similarities when we come to executing the projects.
I think that's the same if you are onshore building a new tunnel or infrastructure project or oil and gas project.
There are some basic elements that's the same.
We have a long, over 50-year experience of marine operations within Equinor, which is more or less the same we are doing when we are installing a wind turbine as we are installing an offshore installation.
So experiences that we have had there...
We have a lot of experiences from different construction yards.
And especially within safety, we see that safety is a challenge in the renewable industry as a whole.
It is much, much better within oil and gas projects.
So we are taking some of the learnings we have from oil and gas into construction of the renewables there.
And safety will always be our main priority.

So that's really a good learning to take in.

[MONA WETRHUS MINDE]
Of course, safety is a very important part of it.
But that's a bit different, you say, from oil and gas.
Are there other things that, I mean, especially maybe in the planning phase or when you plan the project, that you need to think different from oil and gas?

[ARVE RETTEDAL]
Yes, it is different.
you make more money from the oil and gas project.
That's a fact.
I'm not saying that we're spending money like crazy people in the oil and gas project, but we need to have an even better commercial mindset on a renewable project.
And really, every dollar or krone counts on the bottom line.
So that's...
really important and it's important for all the people working within the renewable projects to really see the business case take an ownership to the business case and make this work for an oil and gas project we have had overruns as many of you have read through different newspapers but but usually that's paid on within a few years
Within a renewable project, we will not have that benefit.
So we need to deliver what we have said we are going to deliver at the cost, the quality, and on the time that we are promising, because that has a huge impact on the finances for the project.

[MONA WETRHUS MINDE]
I understand.
And and also one of the things that often are discussed with respect to the costs is the lifetime of the structure.
And of course, then the investment costs or the total capex will change on how many years you will keep the asset.
How do you work around this?

[ARVE RETTEDAL]
It's a very good point and what we are looking into the lifetime of a project.
The longer you make it spin, to say that, for the wind turbines, the better it will be.
And that is related to technology.
So we have engineers working on that together with R&D and institution looking at that.
Usually, maybe we've seen wind parks being designed for 20, 25 years, but we're also looking into how to extend this to maybe be a 40-year lifetime for a wind park.
That will have a huge impact on the value of the projects, but that is also some of the technology development that we are looking into.
At the same time, we are also looking into how to standardize because standardization will really also help us here.
The more standard turbines, foundations and so on we are able to get, we think together with the different suppliers we have, we will be able to lower the prices and get better projects.

[MONA WETRHUS MINDE]
Yes, and before we talk more about the competence you need, can you say something about what plans you have ahead for offshore wind?

[ARVE RETTEDAL]
The strategy from Equinor is the same.
We have adjusted a bit.
It used to say 14 to 16 gigawatts within 2030.
On the last capital market update, we say 10 to 12 gigawatts.
And we are on the right direction to get there.
So that's the plan.
But we need new projects to be sanctioned and have final investment decisions on that.
We are looking into different opportunities in Europe,
in the US and in areas of Southeast Asia.
So that's really exciting and a lot of people are looking into those projects.

[MONA WETRHUS MINDE]
Yeah, and...
I was also wondering about how you see this.
You talked about you're looking into Europe globally for offshore wind.
And this also has to do with the supply of energy.
And it's also maybe a combination of energy sources, as you see it.

[ARVE RETTEDAL]
Yes, and from an Equinor point of view, we say that we are a broad energy company.
Of course, we have the oil and gas, which will be important for many, many, many years to come.
We have the renewable part, which we are getting there.
We have started to get production.
We have wind farms in production, and we will have a quite steep increase over the next couple of years, and together with the low-carbon solutions.
So that's the main areas for Equinor going forward.

[MONA WETRHUS MINDE]
And you need people to be able to do this?

[ARVE RETTEDAL]
Yes, we always need people to be able to do this.
And within renewables, there's been transferred a lot of people over the last couple of years from oil and gas projects.
We have the benefit that we could move people between the different areas because there are some similarities, which I pointed out a bit earlier here.
So, yes.

[MONA WETRHUS MINDE]
And as you say, it's easy to transfer between traditional offshore activities to renewables.

Are you thinking that the people you need are more energy engineers or project managers? Or do you need very specific people to work for offshore wind?

[ARVE RETTEDAL]
Both is the answer.
We need all the technical disciplines that we have.
We need structural engineers.
We need especially electrical engineers.
We need people with project management skills, project control, economists, and so on.
So that's very important.
for us.
But we also need to be a bit more specific in the renewable projects and have maybe, as I said earlier on, a bit more commercial mindset when we are looking into that.
Know your numbers is something that we usually say.
What does it really cost to do this?
How could I reduce the cost by doing it maybe a bit different way?
So that's a bit on the mindset that we need.
But at the bottom, if you're looking into project management,
There are project management essential that's the same for all type of project execution, I would say, which is really the basic.
But then you are specializing a bit when you're working on those projects.
And at the same time, it is also important to say we need different competences in different parts of the world.
We are the project execution organization, but we also need people who understand the local requirements.
It's not easy to sit at Forus or Fornebu to understand local requirements in South Korea.
So we need local competences with regards to stakeholders and towards regulators as well.

[MONA WETRHUS MINDE]
And what people do you need in Norway in the coming years, near future?

[ARVE RETTEDAL]
The area where it's probably most stretched is within electrical engineering.
That's for sure.
And that's a shortage over the whole world.
But
But we also need the other disciplines that we talked about and project management.
And we see that more and more students from your university and others are specializing.
So that's something new and will be really important, I guess, going forward.
So for us that has been in the industry for some time, didn't have the opportunity earlier on to specialize within.
And that is something that we are seeing coming now.

[MONA WETRHUS MINDE]
Yeah, and it's great if we're able to provide the candidates needed in the industry.
It can always be difficult to match with the needs of the industry and providing the students and the candidates at the right time.

Thank you.
So maybe to sum up, then we can say that the future is bright.

[ARVE RETTEDAL]
Yeah, I would say so.
It's really exciting.
And we are looking into different opportunities.
What's going to be the next project?
And we have a very interesting portfolio there.
At the same time, it's really fun and exciting to work in the organization because there is a very motivated workforce within Equinor.
And we also see the collaboration with suppliers that are motivated, really want to get this to work really good.
So that gives me energy during the workday.

[MONA WETRHUS MINDE]
It's always nice with a new challenge.

[ARVE RETTEDAL]
Yes, I would say so.

[MONA WETRHUS MINDE]
Thank you very much, and thank you to our listeners for listening in on this podcast.

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