

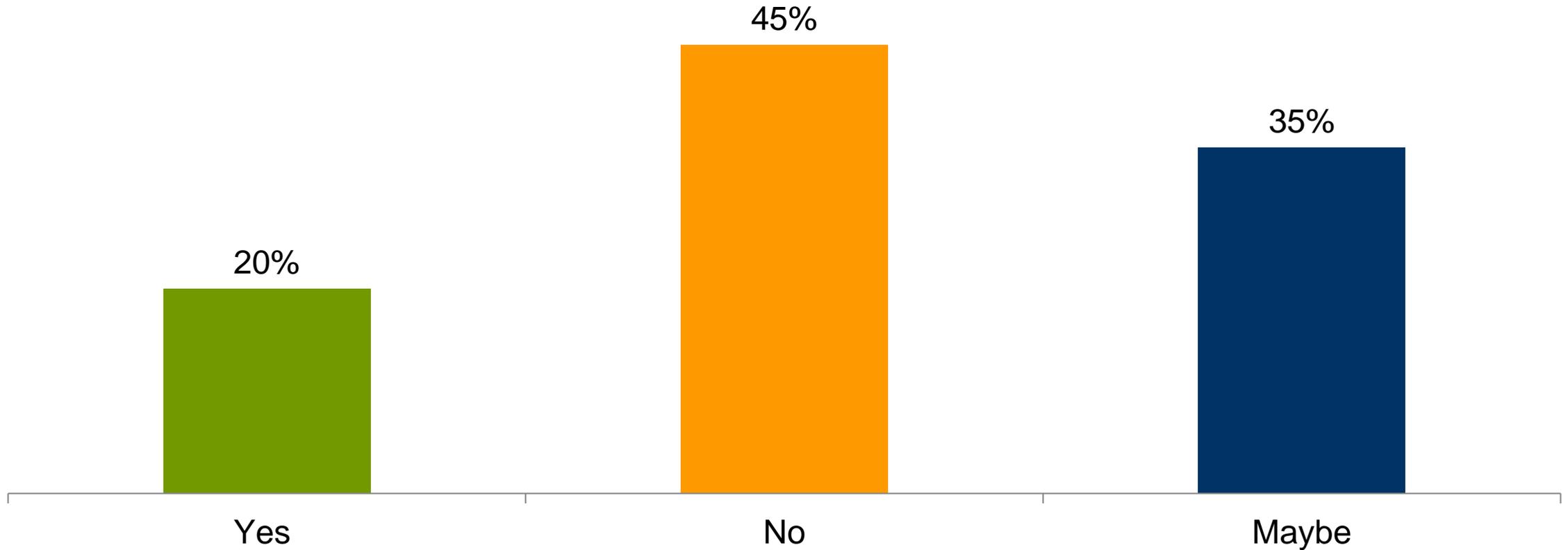
Solution Options & Packages Poll Results

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Special Planning Committee
Merchant Transmission & Offshore Wind
August 23, 2019

Results of a non-binding poll on key Solution Options that differentiate the Packages developed in the Special Planning Committee on Merchant Transmission and Offshore Wind:

- 16 unique responders
- 127 companies represented
- Poll ran from 7/22/19 to 8/12/19

1. Can you support a proposal in which the merchant transmission developer would request rights in the form of temporary “XCIRs”? This concept is included in Packages 1 & 2.



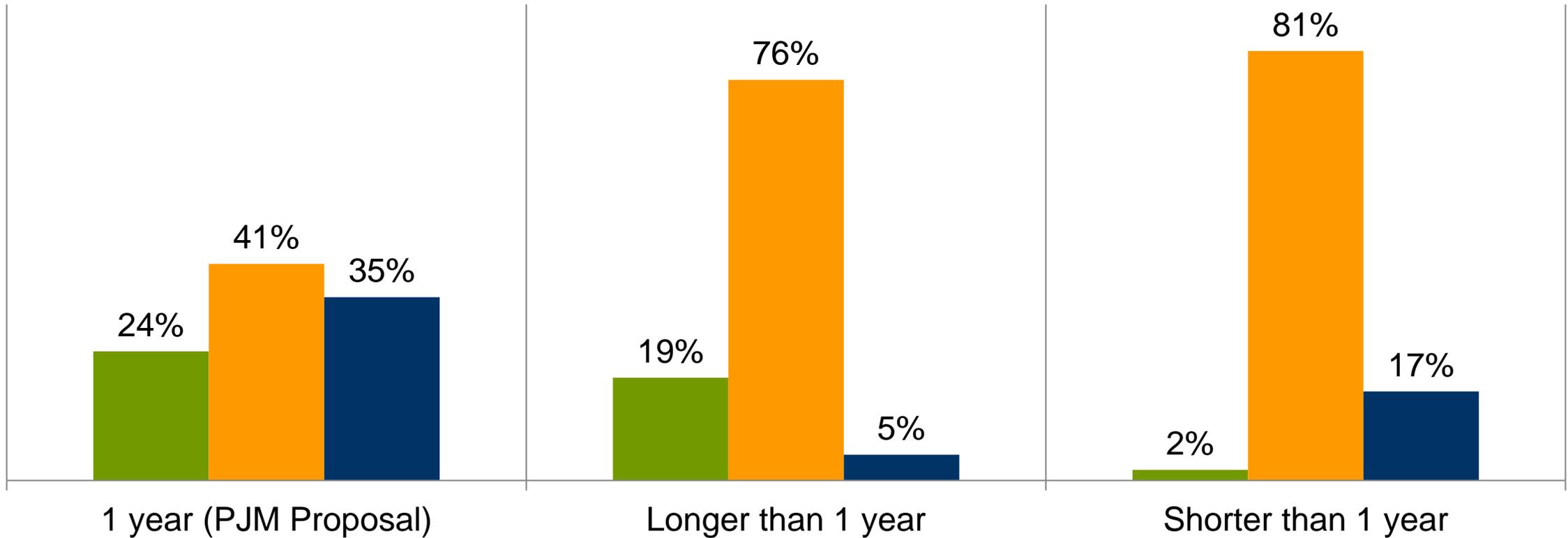
- 1. Can you support a proposal in which the merchant transmission developer would request rights in the form of temporary “XCIRs”? This concept is included in Packages 1 & 2.**

Comments:

- Rights should be available to all possible builders of facilities, not solely merchant developers.
- xCIRs provide a mechanism for merchant developers to acquire rights on an AC non-controllable interconnection and then transfer those rights to a generator seeking interconnection over the tie. Today, generators can seek a third party to build the AC gen-tie facilities and don’t need to request service over a merchant facility. Merchant facilities are speculative in nature and this approach seeks to interconnect speculative generator projects. The compound speculative nature of these projects requires bounds to be put on these requests including putting limits on how long the capacity rights are valid and showing proof of interest in the merchant facility such as a evidence of an open season or contract/MOU from customers/generators. This would ensure the projects in the queue have some probability of commercial success. Additionally, states may eventually desire a coordinated backbone transmission system that they can secure rights to; this system would accommodate generators that they have contracted with to provide offshore renewable energy credits. Would this approach be available to states that would want to secure rights for their contracted generations? The merchant transmission developer would be responsible for network transmission upgrades to support the generator deliverability. For comparability, the generator should have no longer than a year to interconnect so that the granted CIRs are not “hoarded”.
- We are not certain there is a need for this stakeholder process and are reluctant to commit support to any single proposal. Of the three identified, we have the fewest objections to Package 2.
- Use capacity threshold to determine whether temporary rights can be provided.

2. Can you support a proposal in which the XCIRs would be valid and transferable for (Time X) from execution of the ISA for the merchant transmission project? This concept is included in Packages 1 & 2.

■ Yes ■ No ■ Maybe



2. Can you support a proposal in which the XCIRs would be valid and transferable for (Time X) from execution of the ISA for the merchant transmission project? This concept is included in Packages 1 & 2.

Comments:

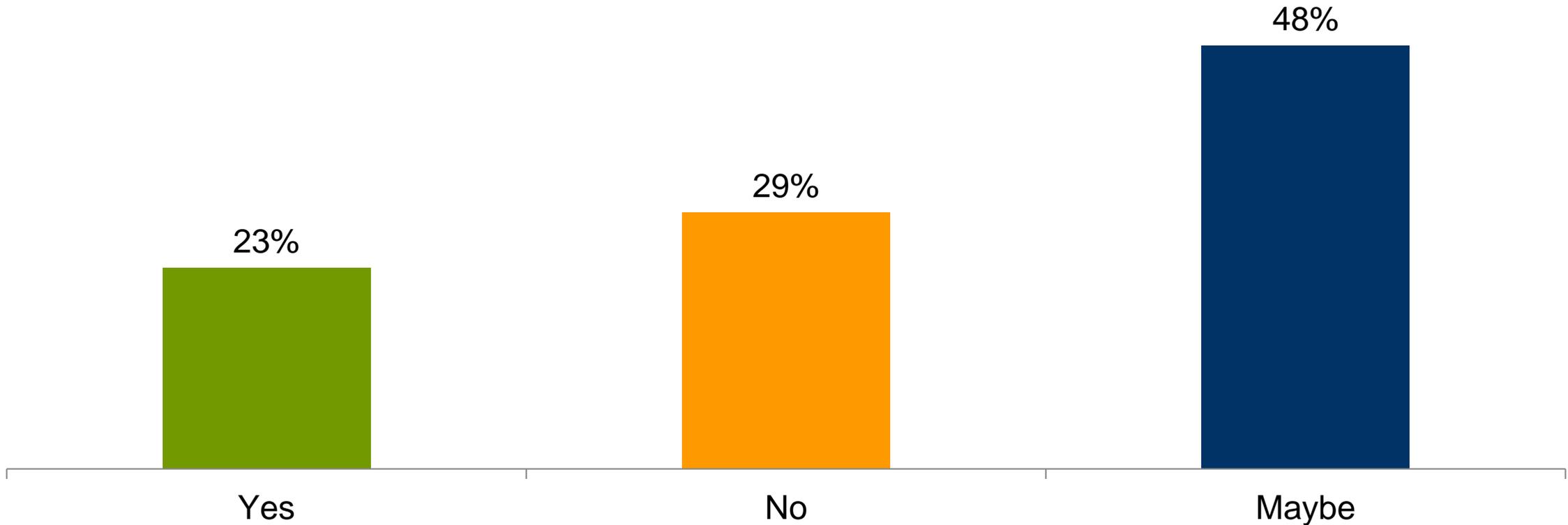
- Rules cannot advantage offshore over land based interconnections.
- Responders generally do not support the concept of XCIRs being exclusively offered to offshore transmission facilities.
- Transmission developed ahead of generation will likely be years ahead of full use of the line, e.g. a line for 1200 MW and one procurement uses 800 MW and another 2 yrs later for 400 MW. Transmission projects take several years to develop. Add to that the years needed for generation RFPs, in multiple cycles and it becomes clear that a longer period is needed. One year is too short, and ability to hold the interconnection position without adding all of the commercial elements for power should instead mirror the generation interconnection rules.
- The ability to find a counterparty within this timeframe (1 year) may be difficult, especially for the full set of CIRs that may be created.

2. Can you support a proposal in which the XCIRs would be valid and transferable for (Time X) from execution of the ISA for the merchant transmission project? This concept is included in Packages 1 & 2.

Comments (continued):

- One year is sufficient time for the merchant developer to ascertain if there’s interest from generators to interconnect to its facility. The merchant customer would need to provide some form of security for the time the rights are being held. Transferability only to other generation interconnecting to the merchant transmission.
- We have serious concerns that Merchant Tx developers would find ways to stall the process, thereby occupying headroom on the system. If any of these packages were to progress, we encourage PJM to consider any possible scenarios where Merchant Tx developers hold xCIRs for longer than a year and ensure that appropriate protections are put in place avoid such scenarios.
- It seems that the benefits of having a merchant build speculative transmission are that it could accomplish the interconnection of several projects and accelerate interconnections for future projects. Temporary CIRs seem to limit application to proposals with prescribed OSW and by requiring a gen interconnection slow down the process.

3. Can you support a proposal in which XCIRs would be added to the RTEP Base Case when the merchant transmission project executes the ISA? This concept is included in Packages 1 & 2.

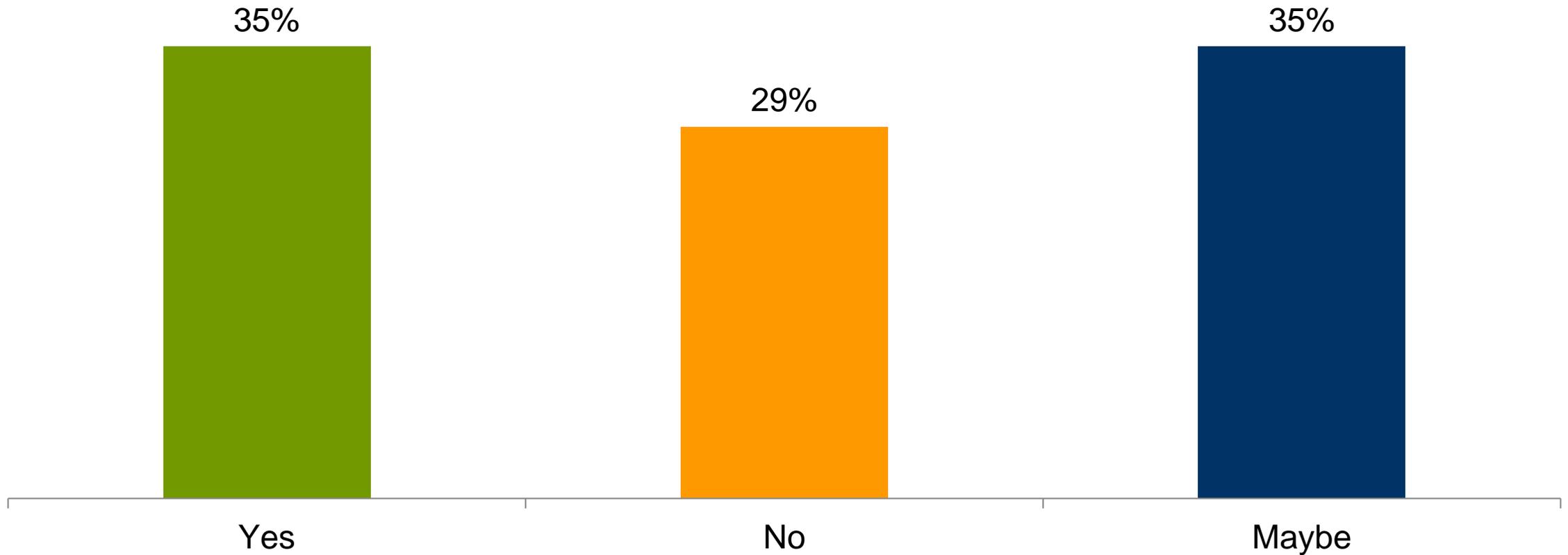


3. Can you support a proposal in which XCIRs would be added to the RTEP Base Case when the merchant transmission project executes the ISA? This concept is included in Packages 1 & 2.

Comments:

- Support for Package 2, not Package 1
- The injection rights should be added before the generation so that the system is designed around them, e.g. the IRs should be the same as generation interconnection IRs with regard to how they are included in future studies.
- Upon execution of ISA
- Only if the XCIRs expire after a year from the date the merchant transmission customer executes the ISA and provides proof that is seeking interest from customers/generators either through an open season or some other form of agreement/MOU.
- Use capacity threshold to determine whether temporary rights can be provided.

4. Can you support a proposal in which XCIRs would be added to the RTEP Base Case when the generator request enters the queue and transfers the XCIRs? This concept is included in Packages 1 & 2.



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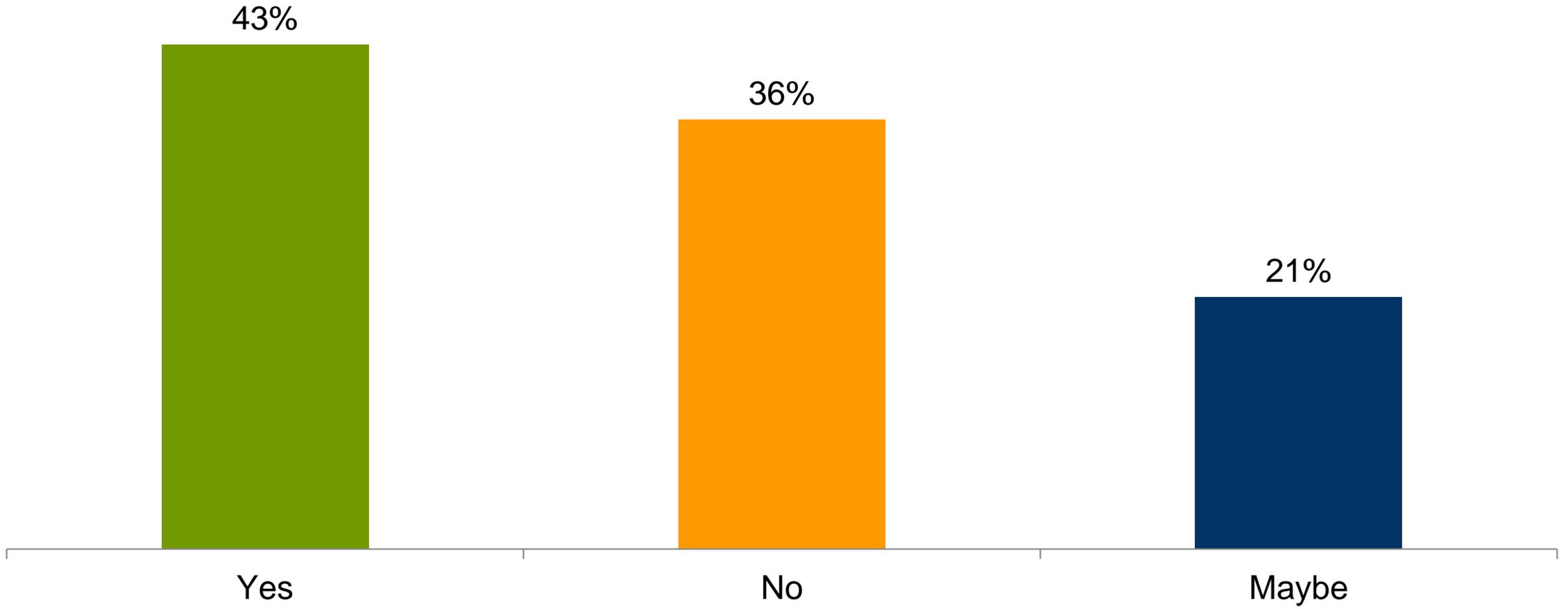
Comments:

- Responders generally do not support the concept of XCIRs being exclusively offered to offshore transmission facilities. That said, both Generators and Transmission facilities must demonstrate site control, contracts transferring rights with applicable language associated transmission cost/rates outlined must be executed prior to Generator entering queue position.
- The injection rights should be added before the generation so that the system is designed around them, e.g. the IRs should be the same as generation interconnection IRs with regard to how they are included in future studies.
- If the XCIRs are not already in the base case as soon as the merchant request reaches the ISA stage, it would be impossible to preserve those rights (for a year as is the current proposal) until the generator claims those rights. If it's possible to preserve those merchant XCIRs, outside of the base case, until a generator enters the queue with those rights, then that may be a supportable proposal. PJM would need to explain this approach in further detail.



Questions on Changes to Attachment N Generation Request

5. Can you support a proposal that would follow the current generation interconnection request process, except that actual generator data would be provided on a delayed schedule? This concept is included in Package 3.





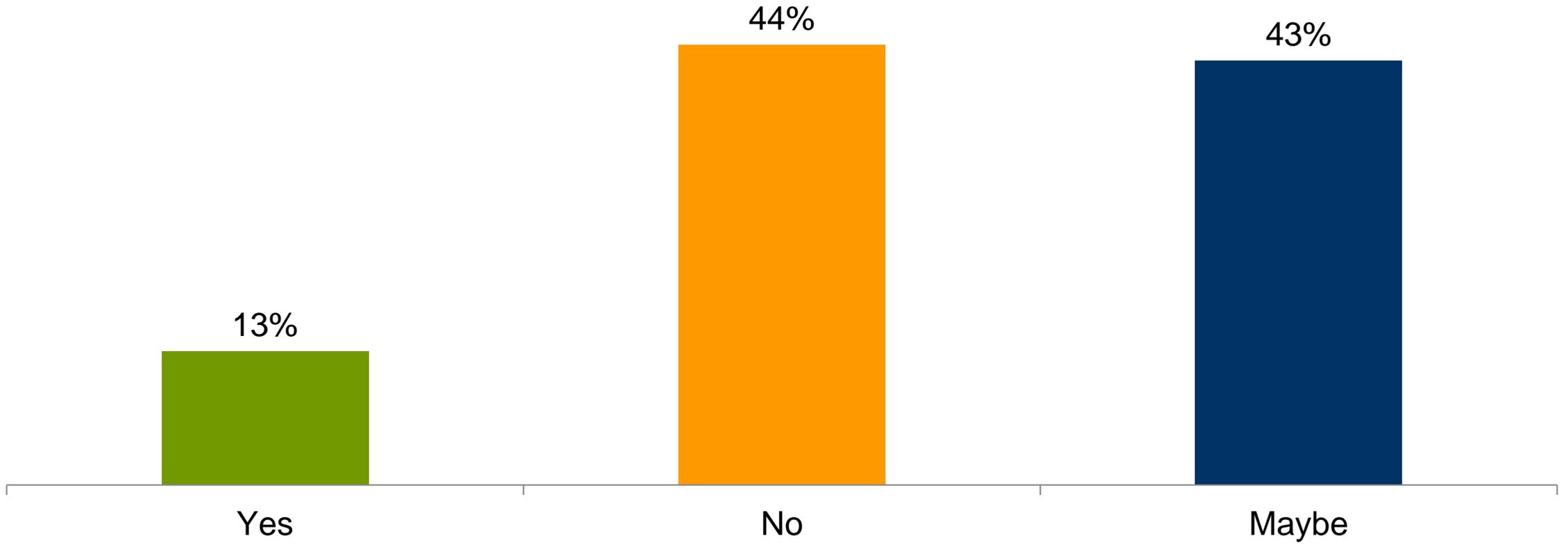
Questions on Changes to Attachment N Generation Request

5. Can you support a proposal that would follow the current generation interconnection request process, except that actual generator data would be provided on a delayed schedule? This concept is included in Package 3.

Comments:

- Need equivalence between land and offshore gen.
- May be able to support if PJM provides the ability for a suspension of the queue request within the process. For example, allow the queue request to “slip” to the following queue window and delay the generator data by another 6 months.
- Depends on whether delayed schedule could result in system impacts being identified late in the interconnection process, resulting in restudies and interconnection cost reassessments.

6. Can you support a proposal that would follow the current generation interconnection request process, but with relaxed site control requirements? This concept is included in Package 3.

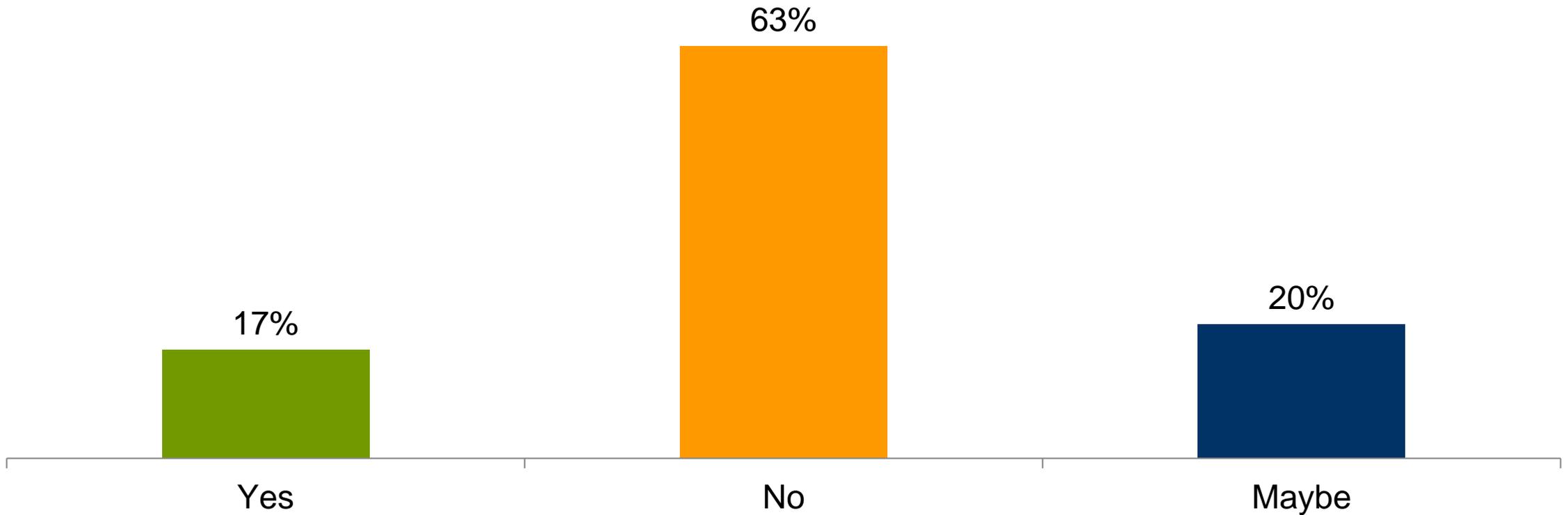


6. Can you support a proposal that would follow the current generation interconnection request process, but with relaxed site control requirements? This concept is included in Package 3.

Comments:

- Only do studies after the site application is filed and approved by the applicable regulatory agency to reduce the number of unnecessary studies.
- Yes - but it should not require the generator site control (i.e. BOEM lease area) as that is impossible. What it should require is a BOEM ROW application. This demonstrates that site control - such as it is in the nonexclusive BOEM ROW process - is being pursued. Milestones / check-ins with this to maintain the position are appropriate.
- Similar to the response to Q#5 – need to provide flexibility for the queue request to delay future information submittal requirements.
- Definition of site control. Don't want non-players clogging up a congested region.
- Site control from POI to beginning of off-shore BOEM land required.
- Depends on whether relaxed site control requirements could result in projects dropping out of the queue late in the process resulting in restudies and reassessment of interconnection costs.

7. Can you support a proposal in which only thermal studies are performed for the merchant transmission line request and short circuit and stability studies are done with the subsequent generation request? This concept is included in Package 1.

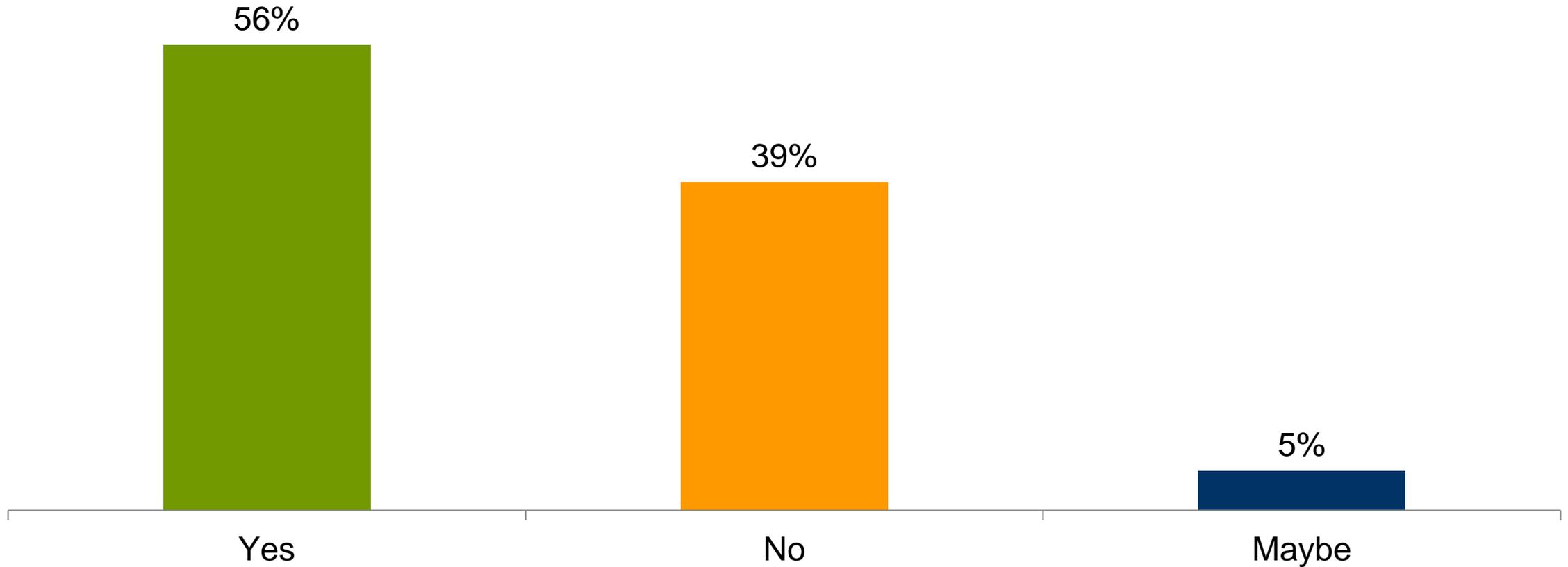


7. Can you support a proposal in which only thermal studies are performed for the merchant transmission line request and short circuit and stability studies are done with the subsequent generation request? This concept is included in Package 1.

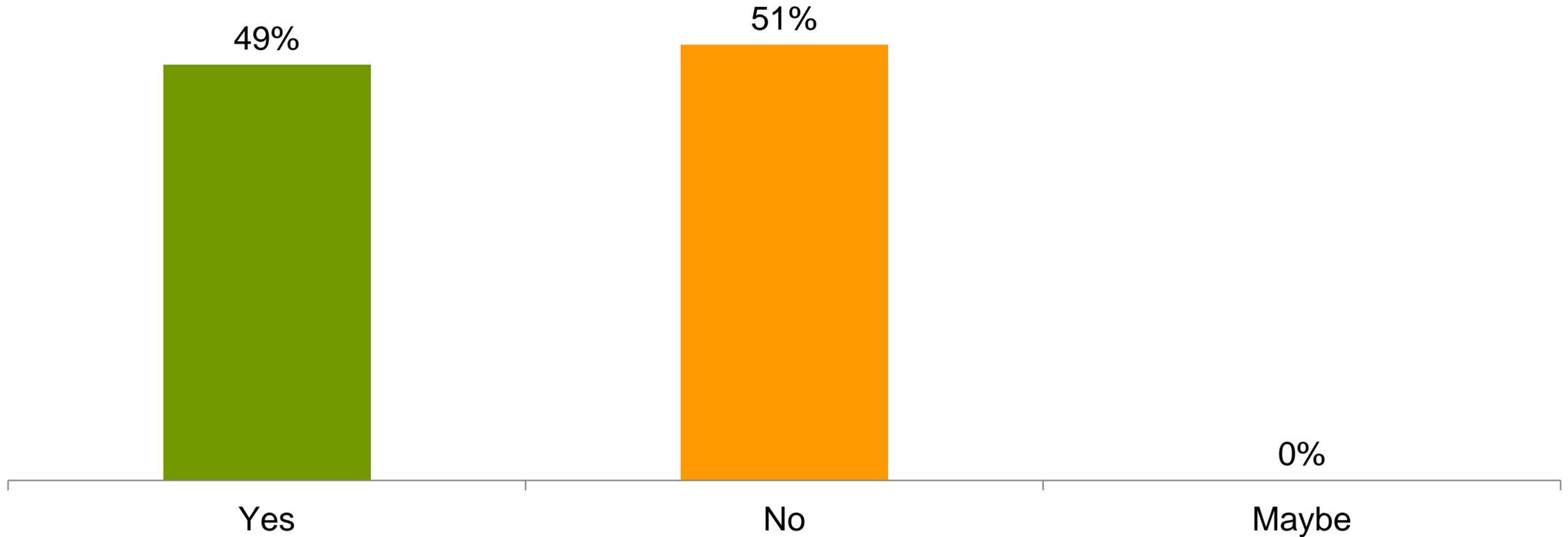
Comments:

- Prefer to do short circuit and stability studies using generic models to screen for possible issues.
- It would be useful to use a proxy generator for short circuit at the line capability - e.g. use a proxy nameplate at line rating wind farm. This really is the same as what happens with wind gen interconnection because actual turbines are substituted later in the process with study true-up.
- The transmission system near the coast tend to be weaker, thus voltage issues are typically more prevalent.
- Must include Reactive study for the cables with reactors or other solution as required.

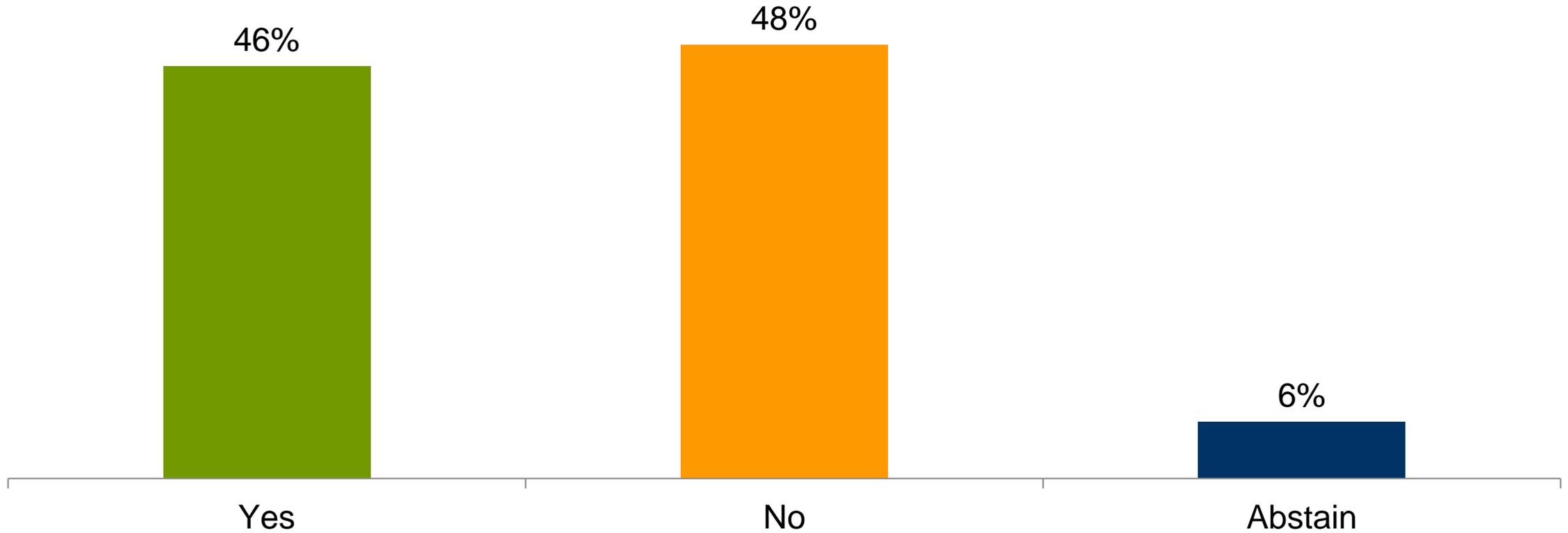
8. Can you support a proposal in which generic generator data is used to perform the studies of the merchant transmission request? This concept is included in Package 2.



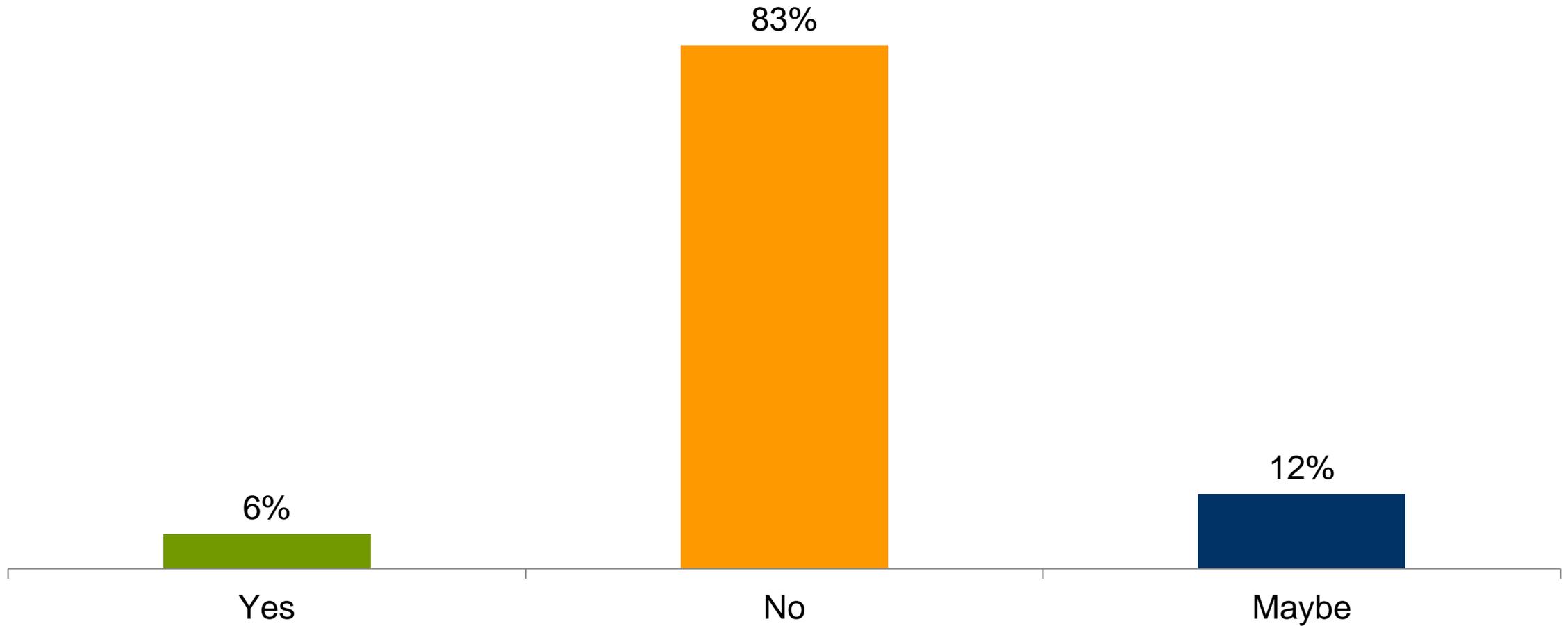
9. Can you support a proposal in which generic generator data is used to perform the studies of the generator interconnection request? This concept is included in Package 3.



10. Should the Special PC continue to pursue a transmission-only solution for offshore generation development?



11. Can you support Package 1?

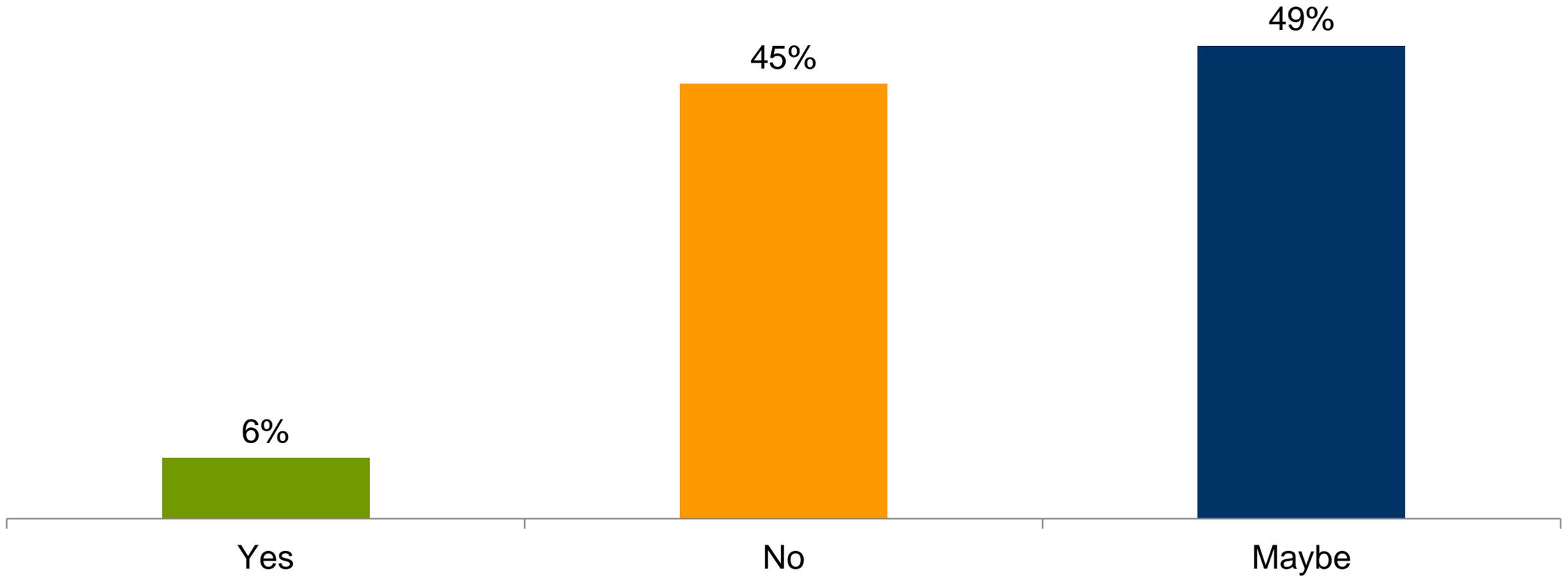


11. Can you support Package 1?

Comments:

- Need the rights to be valid for more than 1 year.

12. Can you support Package 2?

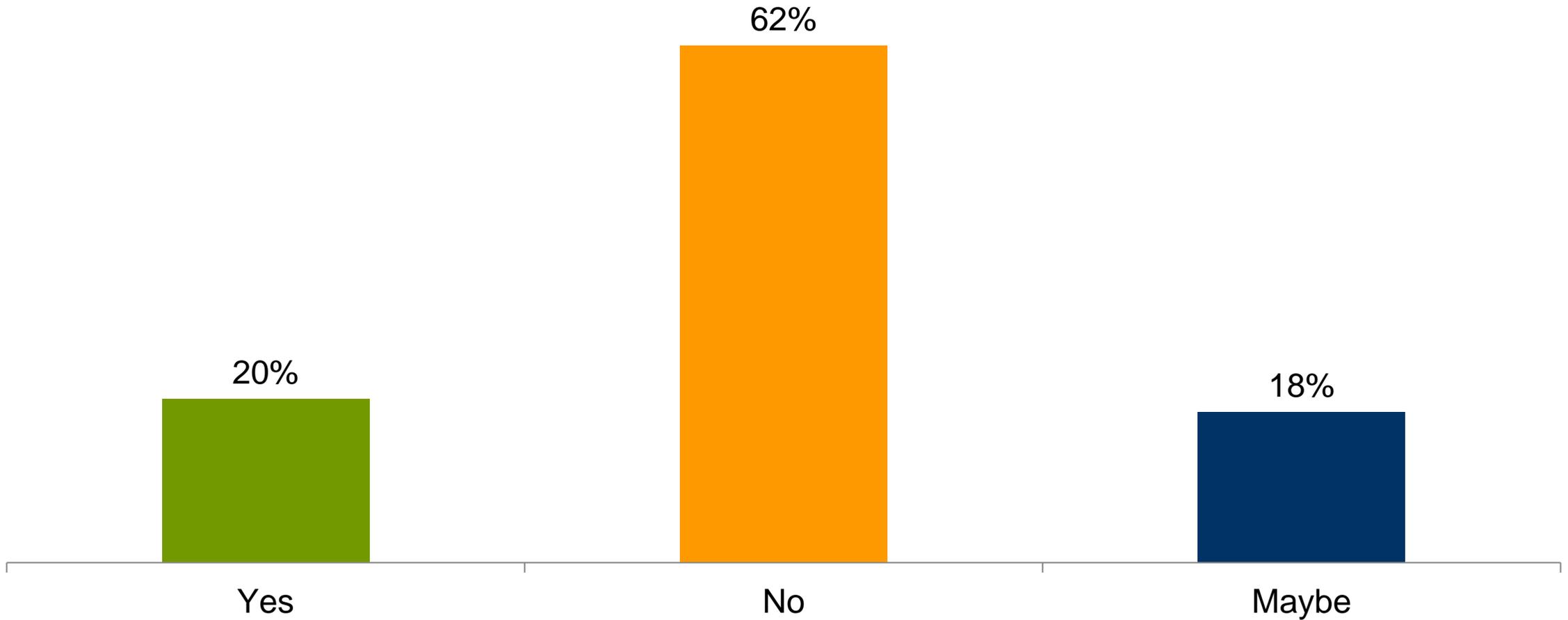


12. Can you support Package 2?

Comments:

- Prefer not to limit the initial interconnection solely to a merchant facility or developer.
- With full studies done with a proxy gen, and generators / system plans after respecting the injection rights even ahead of generation being selected in RFPs to use the line.
- Need the rights to be valid for more than 1 year.
- Provided there is a one year limit on the XCIRs, there are limits on how long the capacity rights are valid and showing proof of interest in the merchant facility such as a evidence of an open season or contract/MOU from customers/generators. This approach should also be an approach available under PJM's State Agreement Approach.
- We are not certain there is a need for this stakeholder process and are reluctant to commit support to any single proposal. Of the three identified, we have the fewest objections to Package 2.
- For Phase 1, where the underwater power lines are radial off-shore to a generator, such shall be deemed and classified as a part of the generation facility such that the generator project sponsor bears full cost responsibility and such costs are not recoverable in transmission rates. For Phase 2, if the off-shore power line facilities become networked, then there must be a discussion of how the costs of O&M, existing power lines (Gen-tie) and new networking facilities shall be allocated in order to ensure that such costs remain with the generator or network project sponsor. No existing regional PJM cost allocation methodology in place to can be utilized to fairly allocate the cost of these facilities across a PJM Transmission Zone or Zones.

13. Can you support Package 3?



13. Can you support Package 3?

Comments:

- This is a good proposal and only needs to have the site control modified so it's clear that site control is established by application for a BOEM ocean ROW for the transmission and not by holding the rights to a generation lease area.
- Need the ability to delay submittal requirements for generator data.
- Impact of relaxed site package on the queue dropout rate should be assessed.

14. Do you prefer to pursue a change or retain the status quo?

