**Take-or-Pay vs Take-and-Pay in Hydropower: Comparison Table**

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| **Aspect** | **Take-or-Pay** | **Take-and-Pay** |
| **Payment Obligation** | Buyer must pay for minimum quantity whether electricity is consumed or not | Buyer only pays for electricity actually consumed/taken |
| **Revenue Certainty** | High - guaranteed minimum payments provide stable revenue stream | Low - payments depend on actual electricity demand and consumption |
| **Risk Distribution** | Demand risk transferred to buyer (utility) | Demand risk remains with generator (hydropower developer) |
| **Project Financing** | More attractive to lenders due to guaranteed cash flows | Less attractive to lenders due to uncertain revenue streams |
| **Penalty Structure** | Penalties apply if buyer doesn't take minimum contracted amount | No penalties for not taking electricity |
| **Capital Cost Recovery** | Buyer commits to pay for capital costs regardless of plant operation | Capital cost recovery depends on actual electricity sales |
| **Market Risk** | Lower market risk for generator | Higher market risk for generator |
| **Investment Incentive** | Encourages private investment with guaranteed returns | May discourage investment due to uncertain returns |
| **Buyer Flexibility** | Less flexible - committed to minimum payments | More flexible - pay only for what's needed |
| **Grid Integration** | May lead to curtailment issues if excess capacity exists | Better alignment with actual grid needs |
| **Policy Implications** | Supports rapid hydropower development | May slow development but improves system efficiency |
| **Financial Impact on Utilities** | Higher financial commitment and risk | Lower financial commitment but potential supply risks |
| **Plant Availability Requirements** | Generator must maintain plant availability to receive payments | Generator must actually deliver electricity to receive payments |
| **Long-term Planning** | Facilitates long-term capacity planning | Requires more dynamic capacity management |

**Key Takeaway**

Take-or-pay contracts provide security for hydropower developers and facilitate project financing, while take-and-pay contracts offer more flexibility for electricity buyers but create uncertainty for generators. The choice between these models significantly impacts investment flows, project development, and overall sector growth in hydropower.