

U.S. Geological Survey Circum-Arctic Resource Appraisal (CARA)

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The volume of yet-to-find petroleum in the Arctic is one of the greatest remaining uncertainties of future world energy supply. Although most onshore areas have been at least partially explored, the vast continental shelves that cover one third of the Arctic are largely undrilled. Using a probabilistic geology-based methodology, the U.S. Geological Survey has assessed the area north of the Arctic Circle and concluded that about 30% of the world's undiscovered gas and 13% of the world's undiscovered oil may be found there, mostly offshore under less than 500m of water. Billion BOE-plus accumulations are predicted at a 50% probability in 11 CARA assessment units in the Barents Sea, East and West Greenland, Canada, and Alaska. Undiscovered natural gas is three times more abundant than oil on a BOE basis and largely concentrated in Russian territory. Oil resources, while critically important to the interests of Arctic nations, are probably not sufficient to shift global patterns of oil production.