

## Calgon Carbon Corporation

NYSE:CCC

**Analyst:** Issam Kaisse

**Sector:** Basic Materials

**BUY**

Price Target: \$23.20

### Key Statistics as of 3/25/2015

Market Price:	\$20.71
Industry:	Commodity Chemicals
Market Cap:	\$1.11B
52-Week Range:	\$18.56-23.13
Beta:	1.07

### Thesis Points:

- Market opportunity in the activated carbon segment
- Regulatory compliance for drinking water
- Stable future cash flow with long term contracts
- Growth opportunity in ballast water treatment

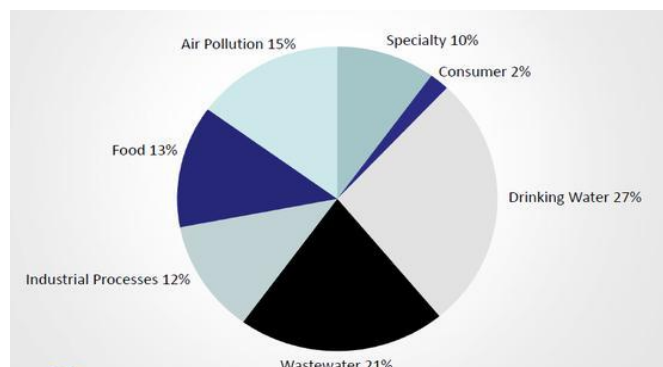
### Company Description:

Calgon Carbon Corporation was founded in 1942 and is headquartered in Pittsburg, Pennsylvania. It provides services and solutions for purifying water and air, food, beverage, and industrial process streams primarily in the United States, Europe, and Japan. The company operates in three segments: Activated Carbon and Service, Equipment, and Consumer. The Activated Carbon and Service segment manufactures and markets granular and powdered activated carbon for use in applications to remove organic compounds from liquids, gases, water, and air. The Equipment segment offers adsorption systems that are used to control volatile organic compound emissions, off gases from air strippers, and landfill gas production; and liquid phase equipment systems for use in potable water treatment, process purification, wastewater treatment, groundwater remediation, and de-chlorination applications. This segment also provides UV oxidation equipment for taste and odor removal in municipal drinking water and for water reuse; Ionic Separator used for the purification, separation, and recovery of products in the food, pharmaceutical, mining, chemical, and biotechnology industries. The Consumer segment offers carbon cloth that is activated carbon in cloth form for medical, military, and specialty markets. The company sells its products and services through a direct sales force and sales offices, as well as through a network of agents and distributors to potable water, industrial process, environmental water, and food.



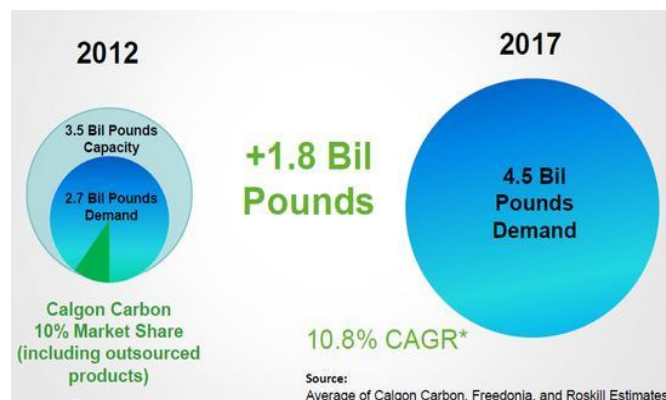
## Thesis

Calgon Carbon Corporation (CCC) is the world's largest producer of granular activated carbon. The firm solves customer purification and separation problems with a variety of technologies. CCC has a diverse product portfolio complemented by ultraviolet light and ION exchange. The company is a BUY because Calgon Carbon will benefit from the advance of the market for pure water and population growth. Compared to its peers, CCC represents good value in its industry and is well positioned to take advantage of the "ballast water treatment" opportunity. The company is poised for growth as it expects boom in demand for its products and is well placed to gain from its aggressive cost-reduction actions, capacity expansion and contract wins. As you can see on the graph below, the company is present in diverse range of markets and its largest contributions are in drinking water and wastewater treatment.



## Market Opportunity

Calgon Carbon Corporation manufactures activated carbon used in the purification, separation and concentration of liquids. The report "Global Activated Carbon Market Forecast and Opportunities"<sup>1</sup> projects activated carbon to grow at a CAGR of 10.8% in the next three years. Since the firm has a significant market share in this segment, CCC could benefit from an increase in demand for activated carbon from 2.7 billion pounds in 2012 to 4.5 billion pounds in 2017.



Thus, the company generates approximately 88% of the revenue from the activated carbon segment. Since the firm is already a leading manufacturer of activated carbon, CCC will be able to grow over 10% for the next few years. The report also outlines that the two major markets for activated carbon are Asia-Pacific and North America with more than 75% of the global sales in 2013. Calgon Carbon continues to develop its activated carbon segment because this product is an effective solution for air and water pollution control. Developed and developing countries are asking for this product because they want to comply with the regulations from the World Health Organization. The activated carbon is mostly used in controlling mercury emissions, as well as the treatment of drinking water and purification of air. The global market for activated carbon is expected to grow in the upcoming years because industries such as mining, food & beverages, pharmaceuticals and petrochemical are using it more frequently. Currently, the company holds a patent that it enables the use for activated carbon to remove mercury.

## Regulatory compliance

Recently, the US environmental Protection Agency has issued a rule regarding the Disinfection By-Products (DBPs)<sup>2</sup>. This agency of the US federal government has limited the use of disinfectants in order to decrease the risk of water contamination from the reaction of chlorine with organic material. According to the rule, the US should comply by the end of 2015. Thus, this compliance will increase the demand for granular activated carbon (GAC) as the company supplies high quality GAC that removes organic material. As you can see on the chart below, this is the process that CCC uses to deliver clean drinking water for society.

<sup>1</sup> [http://www.researchandmarkets.com/research/587z5d/global\\_activated](http://www.researchandmarkets.com/research/587z5d/global_activated)

<sup>2</sup> <http://water.epa.gov/lawsregs/rulesregs/sdwa/stage2/regulations.cfm>



Every year demand is growing in developing countries such as China and India. Hence, those countries are encountering water crisis in rural as well as urban areas and this is an opportunity for the company to expand its business in those regions. Thus, Calgon Carbon will benefit from this increase in demand and the mounting environmental pollution. In fact, governments are trying to save the planet from deteriorating quality of water, so they are enacting policies to limit pollution levels. The rising environmental awareness is triggering the demand for solutions that will reduce the negative effects of environmental pollution.

## Stable Future Cash Flows

Calgon Carbon Corporation has been able to secure its future growth. As a matter of fact, the firm has signed long-term contracts with several clients. Those long-term contracts will make cash flow stability stronger for Calgon Carbon. According to the company's presentation, the table below shows that almost all contracts length is 10 years.

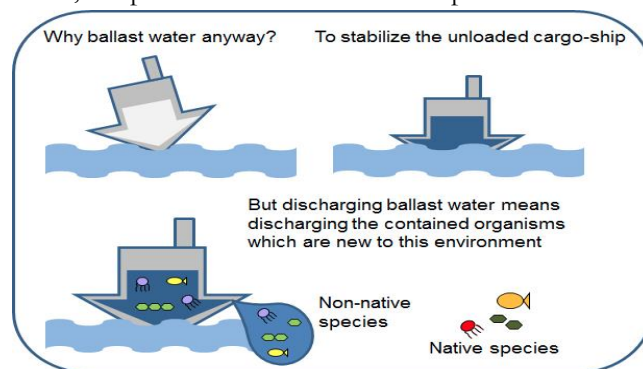
Location	Contract Length	Projected Annual Reactivation Amount (millions of pounds)
City of Phoenix	10 Years	6-11
City of Scottsdale	10 Years	6
City of Glendale	10 Years	1-2
Thames Water (UK)	10 Years*	11

Source: Company Presentation

As discussed earlier there is an increasing demand for granular activated carbon and potable reactivation, CCC will most likely benefit from a flow in long-term contracts. Thus, the company can achieve a strong growth momentum as long as it continues establishing contract length of more than 10 years. Recently, the firm has been able to sign a contract with the municipality of Seoul City in South Korea in order to supply 7 million pounds of granular activated carbon. South Korea selected Calgon Carbon because the country believes that the firm has an advanced manufacturing process that meets the requirements in the drinking water treatment industry<sup>3</sup>.

## Growth Opportunity in Ballast water treatment

Calgon Carbon pays close attention to the subject of ballast water and the negative impact on the marine environment. Cruise ships, large tankers, and bulk cargo carriers use water as ballast to increase stability and improve fuel efficiency. As you can see on the image below, the process of ballast tanks is explained.



Ships will often fill and empty their ballast tanks relative to their cargo weight. When those ships empty their tank in different regions, they introduce non-native species that could harm marine life. Hence, the Marine Environment Protection Committee and the US Coast Guard decided to issue ballast water management regulations that will require ships to treat their ballast water before draining it. The new regulations are expected to go into force within next year and there is a market opportunity for CCC out there. According to Bloomberg, ballast water treatment "market may reach as much as \$3.14 billion by 2023, up from about \$466.6 million this year"<sup>4</sup>. Calgon Carbon will benefit from this new market because ships in US waters will be required to equip themselves with ballast water treatment systems. In fact, the firm acquired Hyde Marine in 2010 as it saw a market potential in the long term. The solutions that Hyde Marine offers are less costly than the competition and can service most ship types. Thus, this acquisition will enable CCC to be a world leader in ballast water treatment systems and evolve into one of the most exciting long-term market opportunities.

<sup>3</sup> [http://www.pgtech.org/news-publications/techburgher/calgon-carbon-awarded-second-major-contract-in-2014-for-drinking-water-treatment-in-south-korea.aspx#.VQ9hRZOG\\_dj](http://www.pgtech.org/news-publications/techburgher/calgon-carbon-awarded-second-major-contract-in-2014-for-drinking-water-treatment-in-south-korea.aspx#.VQ9hRZOG_dj)

<sup>4</sup> <http://www.bloomberg.com/news/articles/2013-12-05/ballast-water-treatment-market-seen-exceeding-3-billion>

## Financials & forecasts

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Calgon Carbon Corporation continues achieving significant improvement from the periods of 2013. At first glance, the company seems to be undervalued and more attractive than its peers. CCC is trading at a 2016 PE of approximately 17, which makes it attractive because the company's PEG ratio is at 2.86. Thus, the stock is undervalued and there is a positive momentum in the long term. Currently, the company is trading near the 52 week low so it is a good opportunity to consider CCC as an investment perspective. Calgon Carbon generated an operating cash flow of \$84.3 million for 2014 and a positive free cash flow that increased by 74% from 2012 to 2014. Also, the firm has a debt that does not exceed \$30 million without any debt servicing pressure. The company announced on February 19<sup>th</sup>, 2015 that it will start paying a dividend of 5 cent per share. Thus, Calgon Carbon is confident that it will have enough cash in the future to keep sustaining the dividend payment. Overall, the pro-forma has a conservative approach with an upside potential of almost 13% and a price target of \$23.20.

## Conclusion

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Calgon Carbon has an interesting growth opportunity. As a matter of fact, the company is actively improving itself in the activated carbon segment and preparing its products to comply with the international regulations. CCC can be considered a long-term investment because it is well positioned to take advantage of the standards about air and water pollution. The management team of the company looks forward to succeed in the future that is why they realize strategic acquisitions that could benefit the company. The ballast water market is a growing opportunity and Calgon Carbon seems to be well prepared to outperform its peers. The global water crisis is one of the biggest challenges and this represent a high growth opportunity in emerging markets for the firm. The stock has the potential to achieve high returns in the next 5 years and for these reasons Calgon Carbon Corporation is definitely a BUY.



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Calgon Carbon Corporation CCC		Analyst DJ SAM	Current Price \$20.71	Intrinsic Value \$20.72	Target Value \$23.20	Divident Yield 1%	Target Return 12.96%	NEUTRAL	
General Info		Peers	Market Cap.	Management					
Sector	Materials	Pall Corporation	\$10,634.64	Professional	Title	Comp. FY2012	Comp. FY2013	Comp. FY2014	
Industry	Chemicals	Xylem Inc.	\$6,311.42	Dearth, Randall	Chairman, Chief Executive Officer	\$ 769,613.00	\$ 1,747,986.00	\$ 1,842,383.00	
Last Guidance	Feb-19-2015	CLARCOR Inc.	\$3,243.35	Schott, Stevan	Chief Financial Officer, Principal	\$ 462,504.00	\$ 694,248.00	\$ 723,420.00	
Next earnings date	NM	Donaldson Company, Inc.	\$5,061.76	O'Brien, Robert	Chief Operating Officer and Executive	\$ 826,991.00	\$ 933,262.00	\$ 955,223.00	
Enterprise value	\$1,112.71	Beijing Sanju Environmental Protection & MeadWestvaco Corporation	\$18,837.18	Rose, Richard	Senior Vice President, General Counsel	\$ 440,646.00	\$ 620,952.00	\$ 565,217.00	
Market Capitalization	\$933.35	Canexus Corporation	\$297.65	Cocagno, James	Senior Vice President of Asia, Global	\$ 42,400.00	\$ 299,732.00	\$ 374,049.00	
Daily volume	0.86	Nippon Carbide Industries Co., Ltd	\$19,651.54	Colletti, Nicholas	Vice President	\$ -	\$ -	\$ -	
Shares outstanding	52.85	Fujian Yuanli Active Carbon Co., Ltd	\$1,755.76	<b>Historical Performance</b>					
Diluted shares outstanding	53.94	Fangda Jinhua Chemical Technology Co., Ltd	\$3,753.60	CCC					
% shares held by institutions	77.02%	<b>Current Capital Structure</b>			Peers		Industry		All U.S. firms
% shares held by insiders	1.32%	Total debt/market cap	6.41%	Growth	5.3%	2.4%	7.1%	6.0%	
Short interest	1.84%	Cost of Borrowing	1.63%	Retention Ratio	79.2%	28.7%	48.4%	61.6%	
Days to cover short interest	3.66	Interest Coverage	28271.10%	ROIC		11.4%	22.7%	11.8%	
52 week high	\$23.13	Altman Z	5.62	EBITDA Margin	11.7%	11.3%	11.8%	13.7%	
52-week low	\$18.56	Debt Rating	AA	Revenues/ Invested capital	105.0%	109.1%	191.3%	202.3%	
5y Beta	1.04	Levered Beta	1.18	Excess Cash/Revenue	6.0%	12.3%	12.8%	18.5%	
6-month volatility	26.06%	WACC (based on market value weights)	8.51%	Unlevered Beta	0.73	0.79	1.21	0.95	
				TEV/REV	1.8x	1.7x	1.1x	2.4x	
				TEV/EBITDA	11.4x	11.6x	9.3x	11.3x	
				TEV/EBITA	15.6x	16.9x	12.7x	15.4x	
				TEV/UFCF	25.4x	45.7x	34.0x	26.8x	
				<b>Non GAAP Adjustments</b>					
				Operating Leases Capitalization	100%	Straightline	10 years		
				R&D Exp. Capitalization	100%	Straightline	10 years		
				Expl./Drilling Exp. Capitalization	0%	N/A	N/A		
				SG&A Capitalization	0%	N/A	N/A		
				<b>Forecasted Profitability</b>					
				NOPLAT		Invested capital		UFCF	
				Operating Cash/Cash	0.0%	\$555.10	\$47.94	\$552.99	\$47.94
				Unlevered Beta	1.10	\$582.86	\$60.00	\$627.29	-\$14.29
				Rev/Invested Capital	150.0%	\$641.14	\$61.23	\$696.86	-\$8.34
				Continuing Period Revenue Growth	7.0%	\$718.08	\$66.25	\$782.29	-\$19.18
				Long Term ROIC	14.0%	\$825.79	\$75.77	\$884.37	-\$26.30
				Invested Capital Growth	Follows Forward Rev. Growth	\$974.44	\$90.76	\$1,000.88	-\$25.75
				Justified TEV/REV	1.6x	\$1,140.09	\$107.29	\$1,147.12	-\$38.96
				Justified TEV/EBITDA	10.0x	\$1,322.50	\$126.83	\$1,269.84	\$4.11
				Justified TEV/EBITA	14.0x	\$1,481.21	\$143.38	\$1,382.43	\$30.79
				Justified TEV/UFCF	30.0x	\$1,629.33	\$158.66	\$1,487.66	\$53.42
				<b>Valuation</b>					
				ROIC	WACC	EVA	Enterprise Value	Total Debt	Other claims
				LTM	8.7%	\$0.89	\$1,230.80	\$71.28	\$40.85
				LTM+1Y	10.8%	\$14.29	\$1,363.83	\$71.28	\$55.73
				LTM+2Y	9.8%	\$7.70	\$1,482.30	\$71.28	\$63.51
				LTM+3Y	9.5%	\$5.88	\$1,629.58	\$71.28	\$81.52
				LTM+4Y	9.7%	\$7.32	\$1,802.15	\$71.28	\$106.44
				LTM+5Y	10.3%	\$13.22	\$1,995.06	\$71.28	\$130.95
				LTM+6Y	10.7%	\$19.12	\$2,219.81	\$71.28	\$168.16
				LTM+7Y	11.1%	\$24.09	\$2,420.94	\$71.28	\$162.49
				LTM+8Y	11.3%	\$27.99	\$2,613.56	\$71.28	\$130.06
				LTM+9Y	11.5%	\$31.51	\$2,800.89	\$71.28	\$74.74
				<b>Monte Carlo Simulation Assumptions</b>					
				Base	Srdev	Min	Max	Distribution	
				Revenue Variation	0	10%	N/A	Normal	
				Op. Costs Variation	0	10%	N/A	Normal	
				Market Risk Premium	6%	N/A	5%	Triangular	
				Long term Growth	7%	N/A	2%	Triangular	
				Terminal Value	0	0.1	N/A	Normal	
				<b>Monte Carlo Simulation Results</b>					
				Intrinsic Value		1y-Target			
				Mean est.	\$21.68	\$21.68	\$23.95		
				σ(e)	\$0.32	\$0.32	\$0.25		
				3 σ(e) adjusted price	\$20.72	\$20.72	\$23.20		
				Current Price	\$20.71	\$20.71	\$23.33		
				Analysts' median est.	\$20.71	\$20.71	\$23.33		